







# Harvard Medical

ALUMNI BULLETIN SPRING 1999



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# Harvard Medical

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Some of my earliest, most vivid, and yet most fragmentary memories come from my pediatrician's office. No doubt my dread of going for shots made the small room where I received them an image that still comes quickly to mind. The visit I remember most completely, however, came after a few episodes of bedwetting around the time I was four. The doctor spent a little time gathering history from my mother and then came into the examining room to sit with me. Nowadays for me to retrieve memories from that earliest stratum of experience is like picking up potsherds. His voice: soft, more tenor than bass. His white coat: not intimidating. His name and face: not preserved. Me perched on an examining table. Him sitting on a rolling metal stool. What he said: "You don't need to bottle things up, you know. You can talk about them."

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## HMS Develops Multilingual Medical Phrase Books

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According to the 1990 census, more than 31.8 million Americans, or 14 percent of the U.S. population, speak a language other than English—an increase of almost 38 percent since 1980, when 23.1 million, or 11 percent of the population, spoke another language. These languages include Cantonese and Mandarin Chinese, Creole, French, German, Greek, Haitian, Italian, Japanese, Korean, Mon-Kmer, Portuguese, Russian, Spanish, Vietnamese, and Yiddish.



photo by Graham Ramsay

Nora Nercessian and Daniel Federman created a series of multilingual phrase books to help health care providers communicate in an ever-increasing variety of languages.

The greatest challenges occur in two types of interactions between patients and doctors—urgent care and work rounds—where linguistic barriers pose a special problem in the absence of prescheduled interpreters and where timely diagnosis and treatment are crucial. So Nercessian and Federman created a linguistic tool, *Communicating with the Patient*, which can be used until an interpreter arrives.

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The difference between *Communicating with the Patient* and other books already on the market is that the questions in *Urgent Care* and *Work Rounds* are tailored for specific encounters and offer only those questions that are necessary for a given situation. In addition, the questions are phrased so patients need only nod or shake their head in reply. The doctor asks the question using phonetics and does not need to know Haitian or Cantonese or Spanish to understand the answer.

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"The design of the questions also carries a special message," Nercessian says, "that the caregiver must recognize the dignity of the patient, and that the patient's vulnerability in a time of medical need is increased by linguistic isolation."

The phrase books represent the cumulative efforts of several HMS faculty and students who had felt the need for such a series during their clerkships. A grant from the Robert Wood Johnson Foundation has made it possible to finalize the initial series and proceed with the translation of the set into three languages—Haitian, Cantonese, and Spanish—although there is no limit to the number of languages that could be used.



Left: Several HMS students portray swing-dancers performing at the Harvard Club in 1929. Amir Taghinia HST '01 supports Rebecca Perkins '01. Marcia Lux '01 stands to Taghinia's right; and Erich Grethel '01 stands behind Taghinia.

## The Schott Letter

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"Before the task of translation begins, the phrase books will be discussed with Haitian, Chinese, and Spanish community members to make sure that the questions are sensitive to the cultural values that the language represents," Nercessian says. This may mean that some questions will need to be rephrased. The final set of phrase books will include questions in English and their translation into a particular language and its phonetic representation.

### Six Degrees of Decussation

Recently, members of the Class of 2001 depicted some of the most significant events of the century by dressing up as flamenco-dancing cats and by stripping off white coats and scrubs to reveal skin-tight, flesh-colored suits printed with dermatones. And these were just some of the surprises in this year's Second Year Show, entitled *Six Degrees of Decussation*.

"Decussation," derived from the Latin for "crossing over," refers to the crossing of nerve tracts in the spinal cord or, in this case, to the handoff from person to person of a mysterious



piece of paper that is witness to significant events in the twentieth century. Each character depicted in the plot is six degrees away from the person who last had the paper.

The show, which ran in February, parodied professors, using themes derived from popular songs, Broadway musicals, and recent films such as *Titanic*, *Good Will Hunting*, and *Patch Adams*.

"We made fun of the professors and of ourselves," said the show's co-producer, Ravi Kamath '01. For





photos by Graham Ramsay

Above: Paul Bollyky (left), David Harrison, and Larry Allen, all HMS '01, sing back-up to "Suddenly Seifter," a lampoon of both the musical *Little Shop of Horrors* and Associate Professor of Medicine Julian Seifter, who teaches nephrology at HMS.

Left: Peter Lio '01 (left) portrays Bullard Professor of Neurobiology Elio Raviola and David Brock HSDM '01 portrays Takeda Professor of Cell Biology Daniel Goodenough in a scene that parodies both the movie *Titanic* and the way the two professors interact while co-teaching their anatomy and histology course. In this scene, Goodenough bets his spleen to win HMS Titanic boarding passes, but instead of playing traditional poker against a human opponent, he competes against a giant brain using PharmCards (pharmaceutical flash cards).

example, in a number called "The Full Tuition," a lampoon of the musical *Rent* and the movie *The Full Monty*, two medical students cannot afford to pay tuition. "The financial aid and anatomy people get together to develop a program in which students strip both to raise money and to teach anatomy," Kamath said.

Another scene, "Greased Histology," parodies the musical *Grease*. A student portrays Dean for Medical Education Daniel Federman building "Greased Lightning," a twelve-headed microscope, to woo Associate Professor of Cell Biology Robin Reed, played by another student.

"It was a great bonding experience for our class," Kamath said of the ten

months and many rehearsal hours it took to create the show. "We all came together to produce something we can be proud of."

The Class of 2001 is donating all profits from the show to two medical charities, Boston Health Care for the Homeless and Soldiers of Health.

#### HMS Launches New Webzine

Now you can learn what is happening at HMS and its affiliates simply by logging onto your computer. A new webzine, *Web Weekly*, has been launched to "create a new and easier avenue for people to learn about the School," according to Donald Gibbons, associate dean for public affairs.

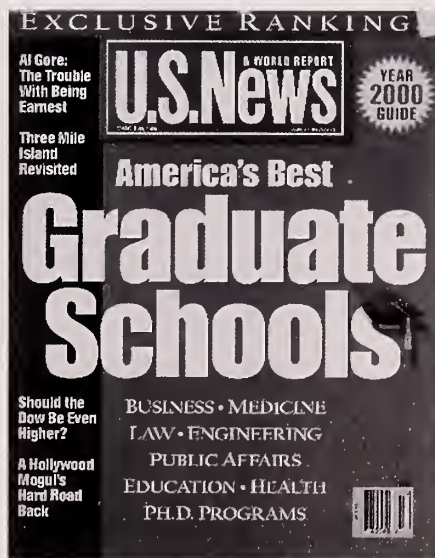
Sections include "Headlines," which covers press releases from HMS and hospital news; "Student Scene," which allows prospective students to learn what campus life is like; and "In Focus," which highlights research findings. *Web Weekly* can be found at [www.hms.harvard.edu/webweekly](http://www.hms.harvard.edu/webweekly).

#### HMS Remains at Top of Rankings

Ever since *U.S. News and World Report* began ranking medical schools in 1987, HMS has ranked first. In keeping with tradition, Harvard tops the 1999 list as the best medical school in the United States.

In the listings by specialty, HMS ranked first for internal medicine, women's health, geriatrics, and pediatrics. The School was ranked second for AIDS and fourth for drug and alcohol abuse. And in its first year to be evaluated on the strength of its primary care program, HMS ranked second, behind the University of Washington.

The rankings are based on four criteria: reputation, research activity, student selectivity, and faculty resources. The complete rankings can be found on the *U.S. News* website ([www.usnews.com/usnews/edu](http://www.usnews.com/usnews/edu)).





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# President's Report

by George E. Thibault

The winter meeting of the Alumni Council was held February 25 and 26. The first evening was to have been an open "town meeting" to which all local HMS alumni were invited—the first in a series of efforts by the Council to engage alumni in a dialogue about issues of concern to them about HMS and about their professional lives. Unfortunately, a Boston snowstorm thwarted our attempt.

During the meeting the next day, we had a lively discussion about how to reach out to alumni. The possibilities ranged from a web site with up-to-date information about the HMS curriculum, to convening regional payors and legislators to address alumni concerns about quality of care and reimbursement. We concluded that the Council's principal role should be to enhance alumni and School interactions around themes of medical education—the alumni can offer insights about curriculum and training that will be appropriate to medical practice in the twenty-first century, and HMS can provide alumni with opportunities for professional renewal through courses, student contact, and teaching experiences. We will integrate these efforts into the School's Year 2000 initiative.

The Council then learned of two important initiatives in the HMS curriculum. First, Nancy Oriol '79, associate dean for student affairs, described how community programs will be introduced into the curriculum through the new Service Learning Division, which will enable students to receive academic credit for community projects that meet defined criteria for academic rigor. Susan Block, assistant professor of ambulatory care and prevention, then described an elective course in death and dying in which students work with faculty preceptors in caring for patients during the terminal phase of illness. The Council was

impressed with both initiatives as indications of the continuing dynamism of the HMS curriculum and its ability to respond to societal needs.

We then had a thoughtful discussion with Dean Joseph Martin, who shared his concerns about the increasing difficulty of supporting clinical medical education in the current environment. Much of the clinical teaching at HMS has historically been done without direct reimbursement, in the interstices of other activities, which to a large extent have cross-subsidized the teaching. Because HMS has no dean's tax, the School has no funds to pay for these activities directly and has relied on the good will of the hospitals and clinical faculty.

These traditional arrangements are under stress, which greatly concerns the dean. He has begun a dialogue with the affiliated hospitals and the faculty at large about how to address these issues. Council members, who share the dean's concerns, offered experiences from their own teaching sites. They promised to revisit the issue and offered to help the dean devise creative solutions.

After an executive session in which we happily confirmed the re-nomination of Daniel Federman as director of alumni relations for a three-year term beginning July 1999, the meeting was adjourned.

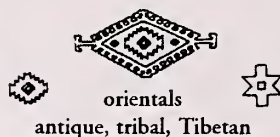
Council members look forward to the Year 2000, which will provide an opportunity not only to reflect on past accomplishments, but also to prepare for the next millennium in medicine. We are excited about encouraging our talented alumni to participate with the HMS community in this reflection and renewal process.

*George E. Thibault '69 is vice president of clinical affairs at Partners HealthCare Systems, Inc. in Boston.*

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# Benchmarks

## Neural Stem Cells Raise the Prospect of Repairing the Brain

Like many students of the human brain, Evan Snyder has garnered support for his work on mice by arguing that it might yield important insights into human development and disease. Few scientists ever get to redeem that promise directly, but Snyder has.

The HMS assistant professor of neurology at Children's Hospital and his colleagues have cloned a human neural stem cell—one of the first times a human stem cell has been identified in a solid organ. Moreover, the researchers have confirmed that the human cells hold great potential for future therapies, suggested by earlier work on similar cells in mice.

Their work validates a decade's worth of research into the cell biology of brain development in mice. It also brings efforts to harness neural stem cells for the treatment of human disease one step closer to reality. Conditions ranging from inherited neurogenetic defects, such as Tay-Sachs disease, to birth-related oxygen deprivation, spinal cord damage, and brain cancer could one day be treated with neural stem cells, Snyder says.

For some of these disorders, grafting mouse cells into mouse brains has been known to succeed, but a lack of human cells for study has delayed such research in the human brain.

Snyder began his research trying to uncover the biological source of the plasticity he had admired as a pediatric neurologist and neonatologist. He had seen newborn babies recover fully from massive strokes that would have permanently debilitated elderly patients.

Earlier work in the field suggested that the brain might harbor stem cells much like those that hematologists have known for decades to reside in the bone marrow. The bone marrow stem cell can renew itself and give rise

Evan Snyder explains how cloned human stem cells can replace missing and defective cells in the brains of mice. "A colleague compares it to 'reseeding' a lawn," he says. "A birth defect is analogous to not putting down sod in the first place. An injury may be like a period of bad weather or people tramping over the same spot repeatedly. If you want to start over, you plant new seeds; the seeds for regrowth of the brain are neural stem cells."

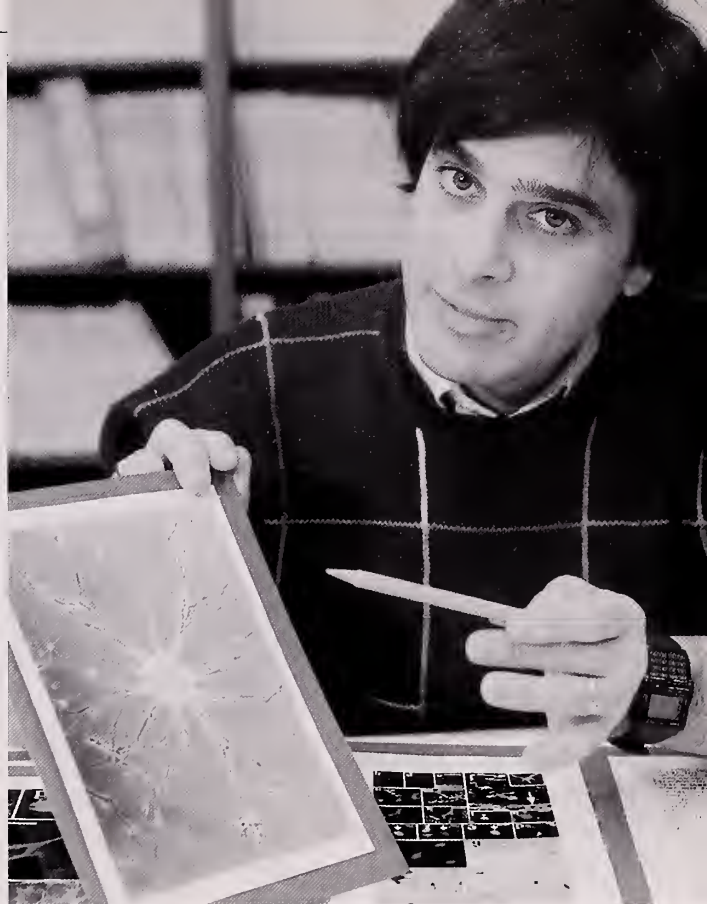


photo by Jon Chase

to all types of circulating blood and immune cells. It can even repopulate an immune system wiped out by irradiation in a bone marrow transplant.

In principle, researchers could develop an analogous treatment—wholesale repopulation of brain areas from stem cells—if only they could lay their hands on a neural stem cell with similar abilities. That, says Snyder, would expand the current paradigm of neural transplantation—which generally involves adding fetal tissue to a small area of nerve degeneration—to the broader goal of “reseeding” the entire brain with progenitors that would then take their cues from the existing brain and mature into whatever cell type was needed, wherever it was needed. This way, diseases that neurotransplantation cannot yet address might eventually be treated, Snyder says, citing large-scale brain defects such as stroke or multi-infarct dementia, multifocal diseases such as multiple sclerosis, and even global defects wrought by some genetic diseases.

Snyder and his colleagues have used human cells developed from tissue removed from the forebrain of a fetus to clone individual cells that have given rise to both neurons and their support cells, the glia. The researchers then grafted immature stem cells into different areas of the developing mouse brain. Following signals from their new environment, the human stem cells migrated along existing pathways and matured into the type of neuron and glia appropriate for the particular area.

The researchers inserted the gene for a pigment-producing protein, allowing them to recognize the human cells embedded in the mouse tissue. The study raised hope that human stem cells could also be engineered to express therapeutic genes, as has been accomplished in mice.

To explore the stem cells' therapeutic potential further, the scientists showed that—in culture—genetically altered human stem cells were able to correct the deficiency underlying Tay-Sachs disease. This finding suggests



# Benchmarks

that the human cells could supply therapeutic proteins missing in single-gene inherited brain diseases. Finally, the scientists found that the stem cells restored a brain area in mutant mice whose cerebellar granule neurons do not develop properly.

In all those experiments, the grafted cells integrated seamlessly into the surrounding brain tissue, Snyder says. Even so, he does not know whether they actually function. To address this crucial question, the scientists are now working on disease models in which they can test whether the animal regains a lost ability.

Another danger lies in the possibility that the grafted cells will cause a host immune response. Although previous rodent work suggests they will not, this question remains unanswered.

Several years of research still separate this study from the first experiments on humans. Snyder's group will next study the human cells in animal models of human diseases, including spinal cord injury and brain damage from oxygen starvation.

In the June 1999 *Proceedings of the National Academy of Sciences*, Snyder and colleagues reported that mouse neural stem cells can take over the function of abnormal cells all over the brain, including cells that cause such diseases as multiple sclerosis. The researchers are using this paradigm to test the human versions of these cells.

Because of ethical concerns, much research into embryonic stem cells remains impeded by a ban on federal funding for work with human embryonic tissue. Snyder's work, however, remains largely outside this debate because he has turned a single sample of fetal tissue into stable cell lines. In fact, his work received National Institutes of Health funding to develop alternatives to the use of fetal tissue. "We think we have done that," he says.

—Gabrielle Strobel

## The Biological Clock Proves More Elegant than Previously Thought

The study of biological clocks is a field whose time has come—and with breathtaking speed. For years, scientists knew a master timepiece was lodged behind the eyes, in a structure called the suprachiasmatic nucleus (SCN), but they knew little about the molecular workings of the clock—the genes and proteins that make the clock tick on a 24-hour basis. Over the past two years, they have discovered that the clock consists of at least six proteins, which, through a series of precisely timed dances, switch genes on and off over a 24-hour cycle.

A report appearing in the January 9, 1999 *Cell* suggests the clock may be even more elegant than scientists dreamed. HMS researcher Steven Reppert and colleagues have discovered that the same genetic machinery that controls the clock's internal workings also drives the output activities that govern the body's daily rhythms—the rise and fall of body temperature, blood pressure, hormones, and the sleep–wake cycle.

"We think this is the first example of an output of the SCN that we understand at a molecular level—that is, how a body rhythm is controlled from the core clock loop," says Reppert, professor of pediatrics at Massachusetts General Hospital.

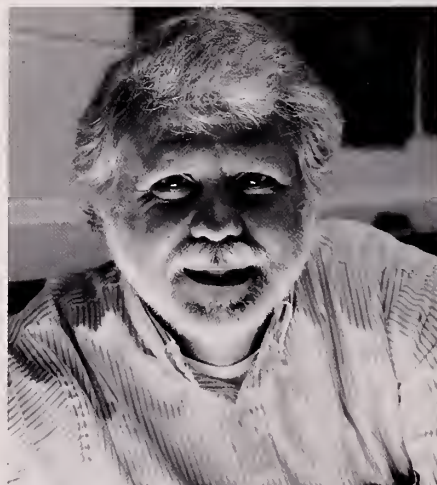
Scientists suspected the clock might drive body rhythms through the release of various peptides, hormones, and neurotransmitters, but were mystified about how genes for these substances were turned on and off. Reppert and his colleagues found that the gene for arginine vasopressin—a peptide that is released rhythmically in specific brain regions over the course of the day—contains the same on-switch as one of the six genes in the central clock mechanism. And the switch for this output gene appears to

be turned on and off by the same proteins, or transcription factors, that control the central clock genes.

Reppert believes the device may be found on a number of output genes, such as those for proteins controlling blood pressure, sleep onset, and other circadian rhythms. "We think this is one way the transcription machinery of the central clock directs output genes in a variety of directions to ultimately get control of rhythms in physiology and behavior," Reppert says.

Ultimately, it may be possible to harness the clock machinery to improve circadian function or to correct defects in the machinery. "Understanding the clock may allow us to manipulate sleep or at least to understand abnormalities of sleep in patients based on aberrations of their central clock," Reppert says.

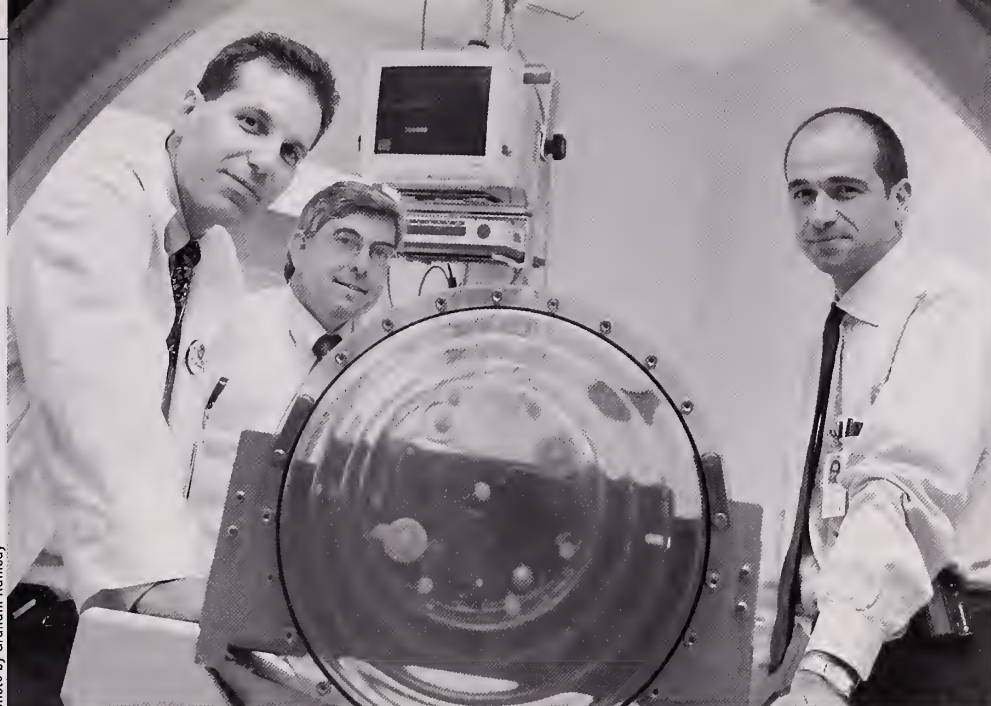
A better understanding of how clock proteins drive body rhythms could also lead to better treatments of disease. For example, heart and asthma attacks are more likely to occur at certain times of day. And certain medications have greater efficiency and lower toxicity depending on the hour they are given. "It's a whole area of circadian biology that is coming into its own," Reppert says.



Steven Reppert

photo by Graham Ramsay





"Cancers are very different. That's exactly the model you should have for stroke. Stroke is not just one disease—it's actually a bunch of different diseases that may have some similar manifestations," says Lee Schwamm, pictured here with colleagues Walter Koroshetz (center) and Guy Rordorf (right).

The discovery is also significant because it sheds further light on a biologically unique phenomenon, Reppert says. "We're talking about a time domain that is unusual in biology. We're talking about a cell being able to keep 24-hour time rather than millisecond or second-by-second time. Feedback loops are very common in biology, but this sort of time domain is what makes this loop special."

—Misia Landau

### Chances to Limit Stroke Damage Are Greater than Previously Believed

Researchers at Massachusetts General Hospital have found that the chances of preventing brain damage and enhancing recovery after a stroke may be greater than previously thought.

Doctors used to believe little could be done after 24 hours to limit the spread of tissue damage. In the November 1998 issue of *Stroke*, Walter Koroshetz, Lee Schwamm, and colleagues announced a more generous estimate. Using imaging methods that revealed the state of brain tissue at various stages in 14 stroke patients, the researchers found damage continued for an average of 32.7 hours. In

one patient, damage progressed for 61 hours.

"What this means is that the window of opportunity for therapies designed to prevent the growth of a stroke is much greater than we thought, maybe 24 to 48 hours," says Schwamm, assistant professor of neurology.

His colleague Seth Finklestein, associate professor of neurology, found that by blocking a tiny artery on the right side of the brain of rats, he and his colleagues were able to create a stroke with a very specific behavioral consequence: an inability to place the left paw on a table. The researchers were able to restore the lost paw function by injecting a growth factor into rats three days after a stroke. Their previous studies had shown that function could be restored by giving the growth factor 24 hours after a stroke.

"So we have extended the therapeutic window for recovery from stroke in a rat from 24 hours to three days at a minimum," says Finklestein, adding, "But rats are rats."

Schwamm agrees. "Ten to fifteen years ago if you developed a drug that could reduce the size of a stroke in an animal model, that would be big news.

Now, 30 to 40 compounds do that. It's not big news to prove it in a rat. You have to prove it in a person."

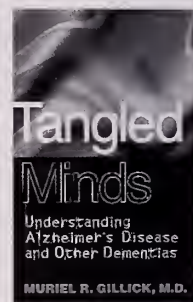
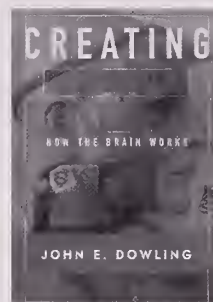
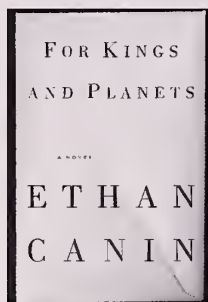
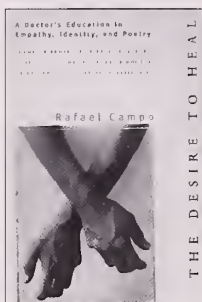
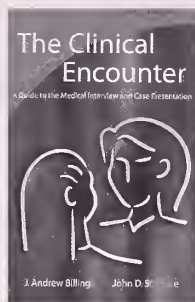
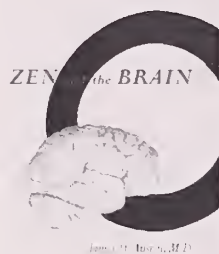
The bad news is that, despite the horde of promising new drugs designed to prevent the spread of stroke, only one has passed clinical trials. One problem is that human strokes are much more complex and variable than those induced in lab animals. They have many causes—blood clots can form in the heart or in the brain, and they can occur in large or tiny vessels in many different regions.

"It's not just like tying up a blood vessel in a specific place and that's it," says Schwamm. "It's very dynamic—a clot may be expanding and contracting. Blood may be flowing in from neighboring collateral vessels to support the region in some patients but not in others."

All of these factors will affect how a patient responds to a particular therapy. "If you just say a stroke is a stroke, your chance of developing a useful therapy goes right through the window," Schwamm says. "There's just not going to be a magic bullet that makes all strokes better."

Misia Landau

# Bookshelf



***Zen and the Brain***, by James H. Austin '48 (MIT Press, 1998). Austin explores the nature of consciousness through a unique integration of cutting-edge brain research and personal narratives of Zen practice. He examines the neurophysiology underlying the brain processes that produce the Zen state, then discusses enlightened states achieved through various means.

***The Clinical Encounter: A Guide to the Medical Interview and Case Presentation***, 2nd edition, by J. Andrew Billings '71 and John D. Stoeckle '47 (Mosby, 1998). A resource for medical students and practicing physicians alike, this second edition provides guidelines for daily clinical practice. The authors present an overview of clinical interviewing skills, guidance for patient interaction, and models for case presentations.

***The Desire to Heal: A Doctor's Education in Empathy, Identity, and Poetry***, by Rafael Campo '92 (W. W. Norton & Company, 1998). Equal parts memoir and elegy, Campo's prose volume offers a series of meditations on his inextricably linked vocations as writer and healer. A discourse of the human body underpins his construction of his own identity—as physician, poet, gay man, and Cuban American—and his empathy with his patients. His evocations of the salutary powers of speech, touch, empathy, and the erotic reveal how he has both healed and been healed by his patients.

***For Kings and Planets***, by Ethan Canin '92 (Random House, 1998). This novel chronicles the unlikely friendship that evolves between Columbia classmates Owen Tarcher, an earnest, prosaic

Midwesterner who stumbles into a career in dentistry, and Marshall Emerson, a cynical, mercurial New Yorker whose fast-lane charisma draws Owen inexorably into a family tragedy, even as Owen begins to fathom the self-destructive nature underlying his friend's seductive appeal.

***Creating Mind: How the Brain Works***, by John E. Dowling '61 (W. W. Norton & Company, 1998). Dowling explores techniques used to study brain function and assesses the progress scientists have made in understanding the brain, especially the mechanisms by which it creates mind and consciousness. In addition to explaining the structures and processes underlying memory, vision, and language, Dowling relates the discoveries of neuroscience to specific examples of brain phenomena

## R for Writers

by Alex Beam

Has anyone noticed that more talented, successful, and readable writers have come out of the Harvard Medical School than from the famed University of Iowa Writers Workshop?

Here's a list of writers who've either studied or taught at HMS: Oliver Wendell Holmes, Michael Crichton, Robin Cook, Samuel Shem, Ethan Canin, Robert Coles, Perri Klass, Atul Gawande, Jerome Groopman, and the late Lewis Thomas. They can write, and they can stitch.

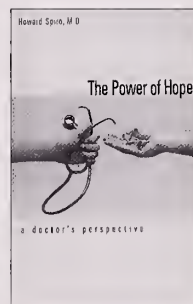
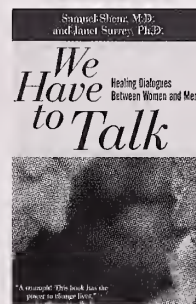
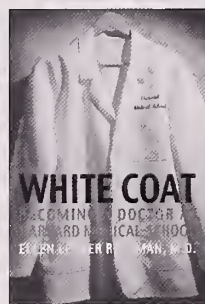
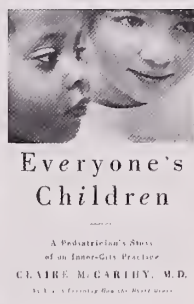
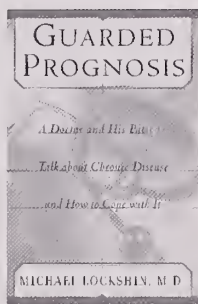
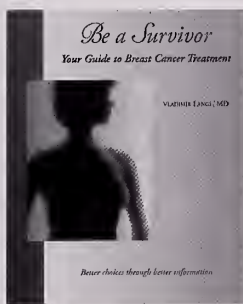
I ran this idea by the Iowans, who did not exactly take to it. The program secretary rattled off an impressive, if occasionally obscure, list of names: John Irving, Philip Levine (?), William Stafford ("I believe he's a fiction writer"), John Gardner, Raymond Carver, Alan Gurganus, Jane Smiley, T. C. Boyle, Bharati Mukherjee ("She's written a lot of books"), James Tate (?), Rita Dove, Denis Johnson ("He's hugely famous"), Jorie Graham (?), John Edgar Wideman, W. P. Kinsella, Don-

ald Justice (?), Galway Kinnell (the flutist?), Tracy Kidder, Wallace Stegner, and Oakley Hull ("a man and a fiction writer").

My testy interlocutor ended with: "Flannery O'Connor—do you know who she was?"

*From the February 12, 1999 Boston Globe column by Alex Beam. Reprinted courtesy of the Boston Globe.*





such as disease, mental illness, aging, and brain injury, demonstrating how these alterations in brain function shed light on normalcy.

**Tangled Minds: Understanding Alzheimer's Disease and Other Dementias**, by Muriel R. Gillick '78 (Dutton Press, 1998). Gillick has crafted a compelling synthesis between a human-interest story and an analytical study. Based on her extensive clinical experience, she recounts the story of a fictional Alzheimer's patient—the composite of many actual patients she has treated over the years. The resulting narrative weaves in a comprehensive guide to coping with Alzheimer's disease and other forms of dementia.

**Be a Survivor: Your Guide to Breast Cancer Treatment**, by Vladimir Lange '71 (Lange Productions, 1998). When Lange's wife was diagnosed with breast cancer, the couple felt overwhelmed by the complexity of the information they had to process. A decade later, Lange developed this comprehensive guide to breast cancer detection, treatment, and recovery in consultation with dozens of experts in the field and with the candid perspectives of many patients and their partners.

**Guarded Prognosis: A Doctor and His Patients Talk About Chronic Disease and How to Cope With It**, by Michael Lockshin '63 (Hill & Wang, 1998). Drawing on 35 years of experience in treating incurable diseases, Locksmith narrates

with first-hand knowledge and sympathy the stories of poor and chronically ill patients who formed long-term partnerships with their doctors in order to manage rather than capitulate to their illnesses. In recounting the stories of these patients, he confronts the difficult ethical, social, and political questions that he believes must be resolved to avoid a future in which "human kindness is for sale."

**Everyone's Children: A Pediatrician's Story of an Inner-City Practice**, by Claire McCarthy '88 (Scribner, 1998). Soon after McCarthy began practicing medicine in one of Boston's inner-city health clinics, she realized that she might as well have moved to another country—for the world within the Martha Eliot Health Center was unlike anything she had ever experienced. *Everyone's Children* introduces us to youngsters who, despite their poverty, are full of faith, hope, and potential.

**White Coat: Becoming a Doctor at Harvard Medical School**, by Ellen Lerner Rothman '98 (William Morrow & Company, 1999). This memoir chronicles a young woman's experience of becoming a doctor under HMS's New Pathway curriculum and philosophy. Beginning with the first day of orientation and ending with graduation, the narrative focuses on the challenges she faced as she grew into the responsibilities conferred by her white coat. Her experiences with patients simultaneously affirmed her desire to heal people

and led her to struggle with the larger questions surrounding medicine and its practice in the real world. [Excerpted on page 46 of the *Bulletin*.]

**We Have to Talk: Healing Dialogues Between Women and Men**, by Samuel Shem [Stephen Bergman '73] and Janet Surrey (Basic Books, 1998). In this book, the authors reject as unfounded and counterproductive the notions that men and women must resign themselves to inherent, immutable gender differences, and that learning to outwit the opposite sex represents the best strategy for preserving harmony in a relationship. Instead, the authors outline a series of communication techniques designed to help couples move closer together, or, if they must move apart, to do so with mutual acceptance and dignity.

**The Power of Hope: A Doctor's Perspective**, by Howard Spiro '47 (Yale University Press, 1998). Drawing on his work on the doctor/patient relationship and pain management, Spiro argues that, while diseases need a physician's services, a combination of alternative and mainstream medicine can help many patients. He distinguishes between disease (what the doctor finds) and illness (what the patient feels). He also draws a distinction between curing and caring, pointing out the ways in which mainstream medicine can learn from alternative practitioners' attention to patients' feelings of pain and anxiety as well as their physical symptoms.

# The Early Years

**T.** *Berry Brazelton has been associated with Children's Hospital in Boston for more than 50 years. Now not only a clinical professor of pediatrics emeritus at HMS, but also a household name worldwide, Brazelton continues to work on the Touchpoints project at Children's. This project trains pediatric health care workers in the Touchpoints model, which Brazelton developed based on five decades as a practicing pediatrician. "Touchpoints" are predictable stages in a child's development that can disrupt family relations, but can also provide an opportunity for practitioners to connect with parents.*

*Brazelton is perhaps best known in medical circles for his Neonatal Behavioral Assessment Scale—the "Brazelton scale," which is used internationally to assess newborns' physical and neurological responses, emotional well-being, and individual differences. Brazelton has also made his way into the average American parent's life through numerous books on child development and through a television program, What Every Baby Knows.*

*During an interview with freelance writer Debra Malina, Brazelton discussed pediatrician training, child development, and the stresses on today's families.*

**HMAB:** You have said that the model for training pediatricians needs to be changed, to include a focus on child development and on strengthened relationships between physicians and parents. Can you elaborate?

**BRAZELTON:** We've been training pediatricians along the pathological model, but studies show that 40 percent of children are still not being reached in our preventive health care model. In my own experience, parents have two questions when they visit pediatricians—"How is my child





doing?” and “How am I doing as a parent?” If we really want to reach parents where they are, rather than from the top down, which is what we’re so well trained for, we’d better start thinking about how we communicate with them. I want to answer their questions, not follow my own agenda, which is what we’ve been trained to do.

Now, people always say to me, “Oh, but you might miss something that way.” I don’t think that’s possible. If you have a good relationship with parents, they don’t let you miss anything that’s important. Of course, to be a good clinician, you need to be a good observer, but that would be part of our training too.

So I would like to see pediatric training continue to prepare students well for pathology, but also teach them that, to connect with hard-to-reach people, you need to think about both parental and child development. And I think we could do that pretty easily, but in the early years of medical education, not at the stage of residents, who feel overwhelmed with all the information they need in order to take responsibility for patients.

We’ve also got to teach pediatricians strategies for establishing relationships—how to use them, how to understand them, how to pull away from them when they exceed appropriate boundaries. And we ought to train them—and, ideally, anybody dealing with parents, including nurse practitioners—in child development.

**HMAB:** The nurse practitioners tend to be more engaged with family issues.

**BRAZELTON:** Not only do nurses approach patients with a greater focus on outreach, but they’re also trained to be more nurturing. By that I mean they’re not just preventing and treating illness *per se*, but they’re also looking at people *as* people.

**HMAB:** Do you think medical students would welcome that kind of curriculum change?

**BRAZELTON:** If you started early, they would. By the time they reach their residencies, they’ve long since shut out their reasons for going into medicine in the first place. In training people from all over the country, we’ve learned that the medical profession is burning out. Young physicians are disappointed with what they’ve been trained to do. It’s sad, because people pay a price for it—not only the pediatricians themselves, but also the patients, who just get a good look-over, with immunizations and height and weight measurements.

**HMAB:** What about general physician training? With adults, you’re not talking about development so much as emotional, social, and

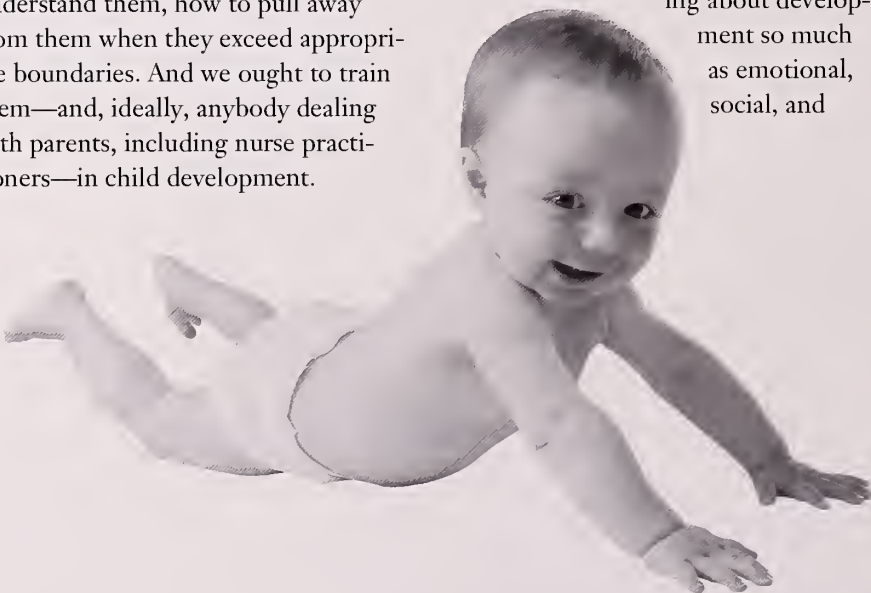
psychological issues. Do you think your holistic approach should be translated to all physicians?

**BRAZELTON:** Yes, I think it should be incorporated into medical school so people feel more comfortable with themselves. Because if you’re really going to think about other people’s ways of functioning—their ethnic backgrounds, for example, or their religious values—you have to be aware of your own. And that means you’ve got to look inside. And of course that doesn’t happen when you’re besieged in medical school—you don’t have the time or energy. So it would take some real rethinking of the curriculum.

Harvard’s New Pathway program is an attempt to do that, and I think it’s accomplishing many of its goals. I wish it were doing more for pediatricians than it is, though, because I think it would be easier to start with professionals who work with small children in order to understand some of the mechanisms that are so parent-friendly, such as temperament and developmental stages.

**HMAB:** Your notion of child development is that it’s not a linear process, that it includes regressions that are predictable and healthy. Is this a revolutionary idea? And how does it translate into practice?

**BRAZELTON:** I have learned from my patients that there are touchpoints, particular stages at which parents need pediatricians. These touchpoints provide a predictable map for most children and their parents. I hope we will soon get to the stage of looking at touchpoints for special-needs kids and preemies. That’s the next big step. And yes, I think it’s fairly revolutionary. Piaget had some ideas along these lines, but I don’t think he ever brought them into the mainstream of pediatrics,







certainly, or child development, so it comes as a surprise to people.

Ever since I've written about touchpoints and have been training people in it, I've gotten flooded with responses from psychologists. The most interesting was a group in Holland whose studies of the times in which children pull back physiologically and reorganize before they take a new spurt in physiological stability coincided with ours, behaviorally. It was fantastic, in terms of back-up. So it's there to be mined. And with all the changes in medical care delivery, I think it could be incorporated in an economical way. But I do think we need to retrain people to use this framework appropriately. I've been surprised at how many people are really grateful for it.

**HMAB:** Let's talk about sleep training—what we've come to call "Ferberizing." [A technique developed by Richard Ferber '70; see the sidebar on page 16.] One study has suggested that infants who are trained in this way, or in the harshest version of it, in which the parents don't go back into the room when the infant is crying, later develop post-traumatic stress disorder.

**BRAZELTON:** I'm fascinated with that, but one study is not enough. Too often it's biased.

You know, I'm in a wind tunnel with all the tough-love people. They, of course, think I'm absolutely for the birds, and I think they are.

**HMAB:** So what is your take on how to get babies to sleep?

**BRAZELTON:** Dick Ferber certainly has an idea in that the ability to sleep through the night stems from a learning process that is contingent upon the child's becoming autonomous. When we sleep, every three to four hours we

come up to a light sleep, cry out, and disorganize. In the case of babies, they have to get themselves back down if they're going to sleep eight hours. So, to fall asleep and stay asleep, they have to do this at least twice for eight hours, at least three times for twelve hours. It's a learning process—can they do it autonomously, or do they need their parents there every time?

For the parents, and this is where I don't think Dick has gone far enough, it's a separation issue. And today separation is a much more difficult issue for working mothers and busy, besieged fathers. Certainly for single parents it's an impossible task.

And so this every-four-hour waking, disorganizing, crying out as if asking for help is something I don't think parents can stay away from easily. So you've got to take their side into account, if you're going to get anywhere with helping them teach their child to sleep through the night.

Because it does take a certain amount of pressure. We're one of the few societies that doesn't share beds with our young children and doesn't supplement them in other ways. So if we really want kids to be independent at night, we should incorporate other ways of helping them, such as giving them loveys, or teaching them to suck their thumbs, or whatever it takes. Pediatricians can either help parents make this a smooth transition for the child, or they can help parents understand the issues. There's no reason for the issues to be traumatic, if everyone understands them. The transition can be made; not easily, but it can be made.

**HMAB:** What about day care? In your book on working parents, you lay out the best and worst times in a child's early development to introduce substitute caregivers. Are there optimal times to do this?

**BRAZELTON:** Yes—and there again, you’ve got to look at the child and respect the parents’ issues. Unless you do, you’re just traumatizing a situation that doesn’t need to be that traumatic. It’s probably always going to be distressing for parents to leave their babies with someone else. But we fought for the Parental Leave Bill for about 20 years, in part because, based on our research at Children’s Hospital, we believed parents couldn’t really separate from a child until they knew they’d bonded with that child. Before that, the grief work that goes on and the kind of separation issues that arise could damage their relationship with their child and their confidence in themselves as parents. It could certainly make it tougher for the child. We fought for four months’ leave, because there are four stages of attachment that take place in the first four months. And we wanted parents to be aware that when they came home, their child would know them, no matter what. And we knew it took at least three months to get there.

I’ve been amazed that the Parental Leave Bill did as much as it did, because I wasn’t satisfied with it at all. But what it did that none of us anticipated was to make big business aware of what it was doing to parents. The companies may not do anything about it, but they’re aware—and that makes them vulnerable to change. We’re seeing change that wouldn’t have happened without it.

**HMAB:** Do we know anything about the long-term effects of day care?

**BRAZELTON:** There’s a multi-site day care study whose results are just beginning to be published now. And the first paper that came out suggested that children had no long-term visible effects from being in day care.

We’ve still got to look more carefully than this study did at such factors as individual differences in children’s temperaments, the quality of child care, what it means for parents to leave their children, how much satisfaction the parents derive from their work,

and how much they bring that self-image home to their children. Although that study didn’t seem to take such questions into consideration, it should be yielding some more information before long.

**HMAB:** The electronic age seems such a huge part of life now, even for very young kids. How has this affected them, and are there any benefits?

**BRAZELTON:** The electronic world is a real competitor for children’s hearts and minds, and parents need to pay attention to its influence. I did some work way back that showed that toddlers can become exhausted physiologically when they watch television. Children get really pushed up against the wall, because they get so involved. And then you tie that to research that the psychologist Albert Bandura did long ago showing that children are much more likely to imitate behavior in a show that has violence or acting out, even sexual acting out. So we know that kids are very impressionable.

## Ferberizing

**Richard Ferber ’70**, director of the Center for Pediatric Sleep Disorders at Children’s Hospital in Boston, has become a household name and, according to his readers’ comments on Amazon.com, something of a household deity. “Ferber is God!” declared one reader, while another one proclaimed, “Ferber: Read, and Believe, and Thou Shalt Be Saved” and “I pity those parents who lived in the Dark Ages B.F. (before Ferber).”

Ferber is best known for his 1985 book, *Solve Your Child’s Sleep Problems*, in which he offers parents advice on helping their children develop good

sleeping patterns. He offers a number of approaches depending on the nature of the problem. One of the best known approaches is designed to help children break their association between particular parental interventions, such as rocking or patting, and the process of falling asleep. This method involves reassuring children at progressively increasing intervals—at first, every five minutes of crying, then every ten minutes, then every fifteen minutes—while avoiding previously learned physical interactions. Eventually, according to his advice, the babies will be able to fall asleep on their own and

sleep through the night. With “Ferberizing,” its many advocates claim, sleep problems are cured within a few nights.

For many parents, Ferber’s advice is gospel. Yet he points out that often what parents consider a sleep problem in their child is really only disturbing to them because *they’re* sleep deprived. The child might be fine. “Let’s say a child will sleep all night in somebody’s arms,” says Ferber. “The child’s sleep might be perfectly normal, but if the parent doesn’t want to sit there all night, it’s a problem. What’s a problem for one family or child isn’t for the next.”





If parents want to teach their children to use electronic media appropriately, they'd better restrict it and participate with their children. And that's hard to do today, because the electronic media is right there, sopping up children's hearts and minds.

And sure, there's evidence that good modeling goes on as well as bad. I used to ask kids to read my eye chart. I didn't expect them to be able to read the letters until the age of four or five, but, by golly, at two or three they were already reading the letters. And they'd learned it from *Sesame Street*. And of course Mr. Rogers is an example of a powerful model, even in early childhood. And I have a show called *What Every Baby Knows*, which small children watch just to see the babies.

**HMAB:** You're talking about toddlers; there are videos now even for infants. Some of them are part of the "make-your-baby-smarter" movement. What do you think of that trend?

**BRAZELTON:** It worries me. Today the concept of emotional intelligence—the idea that a child's emotional development is where the real energy is—tries to counterbalance some of this emphasis on cognitive development. My own thinking focuses on the energy model. If you want energy for social development, then you shouldn't put it all into the cognitive area. I would be worried about having enough energy available for socialization—for learning about oneself, learning about other people, for all the developmental tasks a child has to master.

**HMAB:** What is this generation of parents doing better than their parents did?

**BRAZELTON:** I think the passion parents have for doing well by their kids is better today, and much more exciting than it used to be. I'm heading to Chicago to talk to about 2,000 parents, and they'll be just loaded with energy and passion and excitement. It's bound

to energize their children and to make their children feel cared about. So I think parents today are amazing.

**HMAB:** What are the greatest threats to today's children?

**BRAZELTON:** I've identified ten parental stresses that have significantly increased in the past 30 years, such as both parents working, lack of time, lack of values that our culture stands for, and inadequate support for day care. Parents have a lot to deal with, and it's amazing what they can do. Stresses they feel are bound to affect their kids; a major job for parents is to learn how to cope with stress and to teach their children to cope as well. Today's kids have to be better fitted than previous generations to cope with the world that we're leaving them. I'm not happy about having to leave my grandchildren the world I'm leaving them. But they're learning. Kids today are wonderful. ❧





# Small, Good Things

*by Perri Klass*

A NINE-MONTH-OLD GIRL, HERE for well-child care. Lives in a shelter with her mother. Had a string of illnesses and ear infections over the winter and stopped gaining weight, but now it's spring and she's been healthy for a whole month, and she's back on her growth curve. She's one of nature's wigglers; her mother is trying to keep her in a sitting position on the exam table, but she's pulling herself to a standing position on the cord of the sphygmomanometer, she's rolling and wrapping herself in the paper, she's twisting out of her mother's reach and making a break for it. So I hand her a book, a board book bright with large pictures of baby faces. And she stops, she actually stops, and concentrates on it. Looks at it suspiciously: how does this work? Lifts it, pulls it, focusing hard on the baby face on the cover—and it opens—two more baby faces, one laughing, one crying!

Meanwhile, her mother and I are talking about her development: she sits, she stands holding on, she crawls, she cruises. And I ask about her language—she says mama and dada, but it's not clear whether the sounds mean anything special to her. And all the time we talk, the two of us are watching the baby investigate the book, watching her examine the pictures.

Talk to her as much as you can, I say—a basic piece of pediatric content, a standard snippet of anticipatory guidance for parents of babies. But I use the picture book to take it a step further. Read to her, I say, point to the pictures, name everything in the world for her. She wants to hear your voice, and if she enjoys looking at books, if she associates books with you and the sound of your voice, that will help later on when it's time to learn to read.

A one-year-old Vietnamese boy, also here for his checkup. I give him a similar book, and he has no doubt at all how to handle it, starts turning the board pages with skill and familiarity, resting in comfort on his mother's lap. He's got the book right side up, and he's going through it systematically, looking at each face. His mother tells me that he can name all the family members, and that he says "play" in Vietnamese. We talk about toddler sleep patterns, and bedtime routines, and the joys of a book at bedtime.

And in the next room a sick three-year-old: fever, sore throat, stomach-ache, vomiting, and a little shortness of breath from his asthma. Our treatment plan: throat culture, nebulizer treatment, antipyretic, popsicle. As I wander in and out, checking on him, over the course of the next 45 minutes,

I find him listening to his mother read stories from the pile of used books that has accumulated in the exam room. The big book about trucks gets him through his nebulizer treatment, and then he puts away not one but two pop-sicles while listening to a story about a silly schoolroom and a silly teacher.

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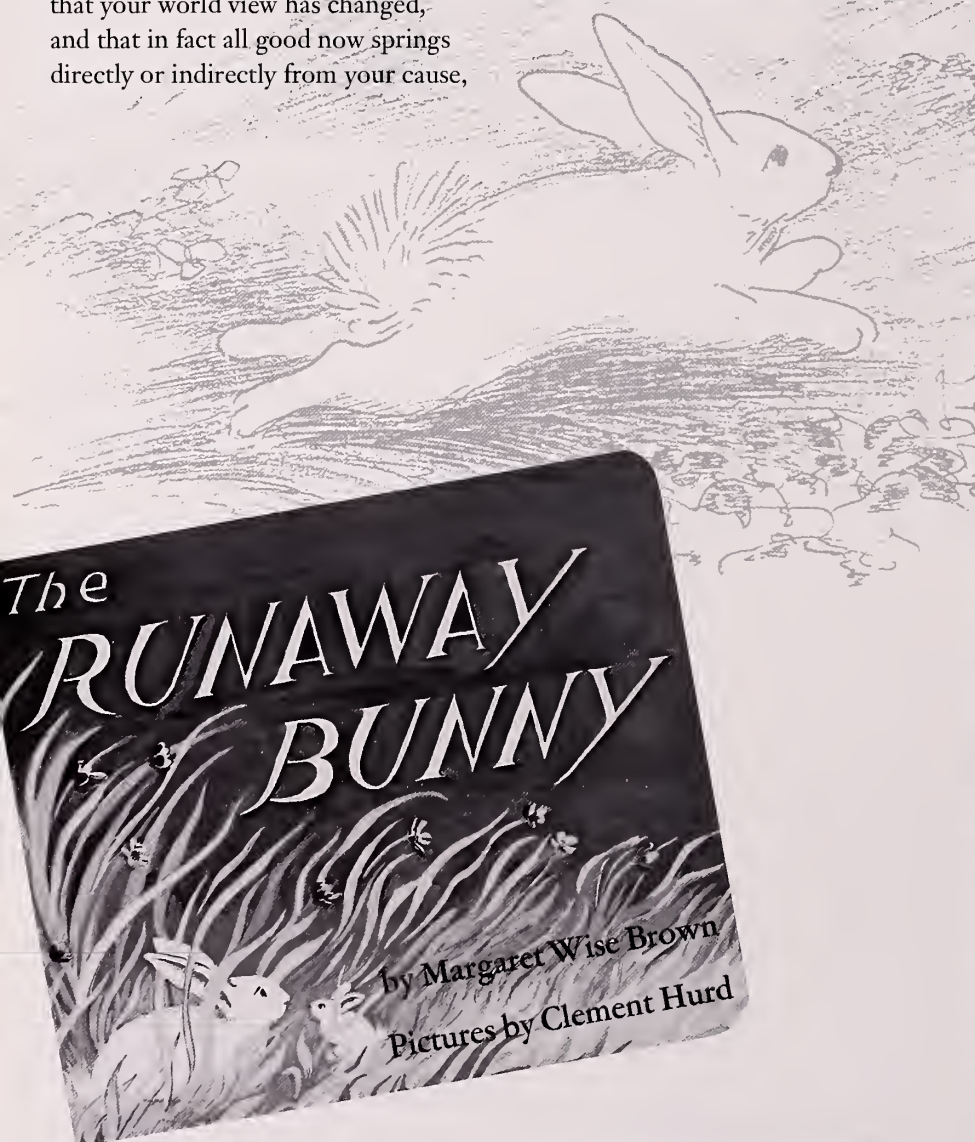
The danger, of course, is that you will turn into a fanatic. You start out with some perfectly reasonable little cause, some small way in which you plan to make the world better (healthy teeth for children! plastic toy safety!) and after a few years of advocating and arguing and campaigning, you find that your world view has changed, and that in fact all good now springs directly or indirectly from your cause,

and all human evils arise when your cause is ignored. (With healthy teeth, we can end starvation; unsafe plastic toys start us on a trajectory that leads to war and genocide!) You get the idea. I mention this because I think I should say, right here at the beginning, that I may have turned, or may be turning, into a fanatic. The cause I found, or perhaps the cause that found me, is books and literacy for very young children, and the importance of the written word in child development and in families. And I see the danger signs in myself: I have come to believe that promoting early literacy helps pediatricians do their basic primary care job much more effectively and

efficiently. I already believe that giving out books and talking about reading aloud is much more than just a warm-and-fuzzy touchy-feely extra; it's an essential and important part of promoting language, parent-child bonding, and eventual school success. Heck, it's one of the most essential parts of the primary care visit. Wait a minute: did I say *one* of the most? And so it goes.

But the truth is, fortunate indeed is the person who has found her cause—or been found by it. I stumbled into this area more than five years ago, drawn to literacy more because I am a writer than because I am a doctor. In writing an article for the *New York Times Magazine* about innovative programs in the pediatrics department of what was then Boston City Hospital, and about the ways that department served its particular clientele of inner-city children, I had occasion to write about a wonderful program in the primary care clinic, Reach Out and Read. For the first time, I outlined in print its three components: volunteers reading aloud to children in the clinic waiting room, primary care providers talking to parents about the importance of reading aloud to young children, and a children's book given away at every checkup from six months to five years.

Unaware that I would become someone who could recite those components in her sleep (and often does), unaware that I would eventually write articles and grant proposals and program manuals and brochures explaining this program, I interviewed one of the founders of Reach Out and Read. Robert Needlman is a developmental pediatrician who had founded the program in 1989, working together with early childhood educator Kathleen Fitzgerald Rice and their division chief, pediatrician Barry Zuckerman. Robert talked to me about both the joys and limitations of giving out books to young children at pediatric





visits. It was, he said, a wonderful thing to do, but it did not in any way make up for all the deprivations and miseries with which poor children must struggle.

“Kids need comprehensive services,” he said, “adequate social services and housing and medical services. This is a small part. It’s one other thing that pediatricians can do that moves things in the right direction.”

When Robert relocated to another city, I got involved with Reach Out and Read and became part of what turned out to be its explosive expansion. With funding from the Annie E. Casey Foundation, we wrote a program manual and started to offer seed money to other pediatric clinics and residency programs that wanted to start incorporating books and literacy promotion. As I write this, there are almost 500 programs around the country, serving more than a million children; we are funded by a variety of foundations, corporate sponsors, and individual donors, and we play a central role in the First Lady’s Prescription for Reading initiative.

• • •

A new patient, first time at the health center where I work in Dorchester. A two-year-old girl, family just moved to Boston. She clings to her mother at first, all dressed up to come to the doctor. I hold out a book with animal pictures on every page. Keeping one hand twined in her mother’s clothing, she reaches out and takes it, then settles back on her mother’s lap and examines it while I ask my preliminary questions and carefully recopy her immunization dates into her chart. I ask how much talking she does, and her mother shows her off by pointing to some of the animals: “Cat!” the child says triumphantly, and then, “Cow! Cow!”

In fact, this is one of the lucky visits; I get to sneak my stethoscope

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*We give you a book  
here at every check-  
up, I say, because  
it’s so important for  
them to grow up  
with books.*

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under her dress and listen to her heart-beat and her breathing while she concentrates on the book. I could wax poetic (another danger, I’m afraid, when a writer becomes a fanatic) and say to you, think of what I am listening to here. I am listening to the lungs that oxygenate the blood and the heart that circulates the blood around the body so a two-year-old brain can work and a child can look at a book. Metaphorically, I am listening to that famous developing brain, that remarkable organ of rapid growth and cognitive leaps, that *Newsweek* cover story marvel of early development.

But actually, what I am doing is moving on to the otoscope, at which point the child’s cooperation breaks down. Screams and wriggling and, unfortunately, a lot of ear wax. This is, after all, pediatrics. But the mother has seen how interested the little girl was in the pictures, and after I’m done poking, she picks up the book again and the child calms down, looking at the cow, the cat, the dog.

At the end of the visit, what I say to the mother is this: She’s very smart—she knows how to handle a book, how to turn the pages, how to name the pictures—do you read to her at home? And we talk briefly about books at bedtime, and two-year-old children’s fondness for repetition and for hearing

the same book read again and again. We give you a book here at every checkup, I say, because it’s so important for them to grow up with books.

A Vietnamese girl, almost one. I bring in our limited stock of bilingual English/Vietnamese books, and the mother tells me I’ve already given her the Clifford board book at a previous visit, but not the book about the frog. So are you reading to her, I ask, and the mother smiles and nods. And I get to say again, knowing I am in the presence of that classic new immigrant drive to see the children succeed in school, “Remember, if she enjoys looking at the books with you, she will like books, she will like reading, and that will help when she gets to school.”

A large part of our clinic population in Dorchester is Vietnamese, and the bilingual books have been a tremendous boon; in response to requests from Reach Out and Read programs, Scholastic Inc. and R. R. Donnelly together translated four books each into 12 languages. I have seen entire Vietnamese families cluster round to examine the remarkable appearance of a children’s book printed in the right, accessible language, and I know that some of the parents and older children use the books to practice their English as well.



And last, a sturdy three-year-old, a boy from a family I used to worry about. When I first met his very young mother, she seemed somewhat limited in her own language, in her ability to respond to her children's questions, in her engagement with the world. But she's grown up now, she's managing in the world, managing a job and single motherhood; her older child is in kindergarten now and loving it, and the little boy can't wait to go. And as I come into the exam room, what he says to her is, "Do I get a book?" The mother looks at me: does he get a book today? And with the greatest pleasure, I bring in several—the story of a goat who won't eat his garbage, a beautiful alphabet book, and *Curious George*—and my patient goes for the goat, commenting that his brother already got *Curious George*.

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What we know in pediatrics, what we have had the luxury to learn, in this country and in this century, is this: taking care of children is more than keeping away disease. Keeping away disease is incredibly important, of

course, and there have been many times and places (still are many places, even in this time) when doing that stretches medical resources as far as they'll go. But not us, not here. We have the breathing space to consider development, to understand that a pediatric success story is a child who grows up healthy, not only in body and mind, but healthy in family and in the larger world. A child who sees gunfire and death on the street is not a pediatric success story, any more than a child who is not spoken to as a baby and therefore does not speak. And our approach as pediatricians is and ought to be geared toward prevention as well as cure. By incorporating books and what we somewhat pedantically term "anticipatory guidance about early literacy" into primary care, we are prompting parents to do the things that stimulate literacy development in their children—and also giving them the books, the tools they need to carry out our advice.

This is not a new concept in pediatric practice. Don't just talk about injury prevention—give the poison center number as a sticker for the

phone, give a bottle of Ipecac. Don't just talk about car and bike safety—find ways to distribute car seats and bike helmets to the families that can't easily afford them.

It's also not a new idea that the doctor's words carry weight, or that something given by the doctor has a special meaning to parents—that's why all the formula companies stock our health center with free samples, why the white grape juice people for a while were sending us new toys and display items every week. Parents are not surprised (or, sometimes, particularly impressed) to hear a teacher or a librarian talk about reading, but they are often astonished when a doctor brings it up, in the context of health, safety, and development. Barry Zuckerman, now chief of pediatrics at what is now Boston Medical Center, points out that literacy issues act as a catalyst for community action, and that when physicians step beyond their traditional role and become involved in literacy, they bring a new element, a new voice, and often a new energy.

You're already having these conversations, I find myself saying to pediatricians when I do Reach Out and Read trainings. You're already talking to parents about speech and language and development, already urging them to talk to their children, in many cases modeling it in the exam room. The books make it easier and more effective to give this advice, more likely that parents will follow it. You're already talking about sleep issues and bedtime routines—use books to give practical advice. Help parents understand what they can expect from their young children: sure, babies will eat the books—that's why they're board books. Two-year-olds may want to



**Perri Klass (left) shows a book to a young patient at Dorchester House Health Center.**



hear the same story over and over—they crave repetition, and it seems to be essential for the stimulation of that rapidly developing brain. Ask questions, name objects, and, as your child gets older, watch him move from filling in familiar words at the ends of sentences to telling you the story.

We want to reach the little children. There should be books in the home when they are growing up, books in the home before they get to school. So many homes are without any printed language—no books for children or adults, no magazines, no newspapers—what is termed a “low literacy environment.” A book at every well-child visit from six months to five years means nine or ten books by kindergarten.

The idea is to help parents help their children arrive at school primed for reading, primed for success. And yes, the children will be much more likely to have basic literacy skills, ranging from book handling to letter recognition. And they’ll also, with luck, have good associations with books, they’ll come to school able to look at books and remember the pleasure of sitting on a parent’s lap and hearing a story. And the books are beautiful. They brighten the exam room, and the children reach for them and smile, carry them home clutched tight. And the parents come back and say with pride, she made me read that book over and over and over. He took that book everywhere—he even took it to bed with him!

It’s clear that the children love the books; the older children come into the exam room and demand, “Are you going to give me a book today?” It’s clear that the doctors love giving them out and that many doctors, especially those working with children growing up in poverty, feel a strong drive to send home anything that may brighten the children’s homes, widen their worlds, open up their lives.

And evidence is now accumulating to show that this intervention by pediatricians can dramatically affect parents’ reading practices at home. In a study published in the May 1999 issue of *Pediatrics*, parents who received books and literacy advice from their doctors were ten times more likely to report reading to their children at least three days a week than parents who received standard pediatric care without a literacy component. And several abstracts presented at the recent Pediatric Academic Societies meetings suggested that pediatric literacy promotion may be linked with better language skills in young children.

But that’s not all. It is also, if I may say so (here goes the fanatic again), the right thing to do. Children’s homes should have children’s books in them. Children should be able to ask to be read to, first, before they can talk, by handing the book to a parent, or by poking the parent with the book or, in the case of my own youngest child, by hitting a parent’s newspaper with the book until the newspaper is in shreds and the parent is reading aloud instead. Robert Needlman was right: giving a book to a child does not fix all the other things that may be wrong in that child’s life and should not in any way lessen our efforts to build stable families, safe neighborhoods, and good schools. But giving a book to a child is, at the very least, a small, good thing (which is, incidentally, the title of a great Raymond Carver short story).

Giving a series of books to a child, accompanied by advice that helps parent and child enjoy the books, can be much more than that. It broadens the definition of pediatric health care and



the role of the pediatric health care provider to include literacy, acquaintance with print, early exposure to books, and the possibilities of the written word. It is also a way of saying to parents, over and over: as your pediatrician, as the one who weighs and measures and immunizes and examines your child, I believe in your child’s mind, in your child’s potential—and in your ability to help your child grow and develop and learn.

It’s a message of respect and even affection. At the very least it’s a small, good thing. At best, books can change a child’s perception of the world, a parent’s perception of a child. They can make possible so many leaps, so many flashes of understanding, so many moments of pleasure and amusement. They can brighten the home and enlarge the world. ✨

*Perri Klass '86 is assistant professor of pediatrics at Boston University School of Medicine, a pediatrician at Dorchester Hulse Health Center, and the medical director for Reach Out and Read. She is also the author of several books, including A Not Entirely Benign Procedure: Four Years as a Medical Student; Baby Doctor: A Pediatrician’s Training; and Other Women’s Children.*



# Tell Me a Story

*by Robert Coles*

IN THE SPRING OF 1960, I WAS HOPING to work with the African American children who had just begun to initiate school desegregation in the Deep South, and with the white children who, for the first time, shared classrooms with boys and girls of a different race. An NAACP official reminded me that “white folks are strangers to Negro children” and that I was, conse-

quently, unlikely to be trusted or told the truth when I met with those children, who were caught up in a severe social and political upheaval, a struggle that had even prompted street riots, necessitating the intervention of the federal government, so court orders could be upheld and implemented.

I was told to seek the advice of Kenneth Clark and Mamie Phipps



A desegregated elementary school is sparsely attended, as white students stay home in protest. In his book *Children of Crisis*, Robert Coles wrote that one of the first children he met in New Orleans was Tessie Provost, a first-grader who had no white children in her class. "They said I would be seeing the white kids, but none have come yet," she told Coles, "and the teacher, she says they may never come—all on account of me."

Clark, two African American psychologists who had founded the Northside Center for Child Development in Harlem. To this day I remember the Clarks' skepticism. They wondered whether a white northerner like me could get very far with those children. They were even more concerned, though, for another reason—and here is Kenneth Clark speaking to me loud and clear while my tape-recorder did its work—"It's true, you'll have to work hard to overcome obstacles, but race isn't the only problem, if you'll let me say so." He paused—and then pursued a line of discussion I'd not anticipated. "I'm glad you're concerned about the meaning your appearance will have for the Negro children you meet, but I think that's only the *beginning* of the problem," he said. "I'm not sure you'll be able to be as helpful to them as you'll want to be."

He had been, until then, describing to me the racial divide that I had to try to cross, but with those words he moved in another direction, even as I assented, assured him I'd do my best to be as accommodating and understanding as possible. He was quick to acknowledge my desire to be helpful, but he wanted to get into a broader exchange. He wanted us to set aside the perspective of the South with its racial turmoil in order to pursue the work he and I had both learned to do as professionals who work clinically with children.

Dr. Clark explained a concern about the work he and his wife had tried to carry out in the Harlem neighborhood where the building in which we sat was located: "I was trained in

graduate school to classify problems, to use a clinical nomenclature, to look through the lens of psychopathology, but I worry sometimes that I haven't the vision, the good judgment, to find other lenses that will help me see things I'd otherwise miss. I worry that my clinical mind, always on the lookout for trouble, distracts me from spotting what keeps these kids going, the engines in their heads that really work."

His eyes sought out the windows of a nearby apartment building, and beyond it the streets of Harlem. "For a long time I was anxious to make diagnoses," he continued. "There were more kids who needed our help than we could possibly ever see, but at least we could do those interviews, one after the other, and if there was a kid who seemed 'promising,' we'd try to see him, see her, or if the kid was 'disturbed,' we'd do our best to try to talk with the parents and teachers, though, so often, there was little the few of us, with all the demands on our time, could hope to accomplish."

"I'll never forget one of those kids—he really got to me, and he became one of the best teachers I've ever had. He was fresh, and sassy, and I was in the middle of slapping psychological labels on him, after the proverbial evaluation interview, at the most an hour, given our waiting list of weeks, months. The boy's name was Jimmy Joe, and he was 12, and having trouble at school, and driving his mother out of her mind, and already called a pre-delinquent by his teachers and a school doctor who saw him because he was always fighting with other kids."

"I asked him why he was here to see us, and he gave me an answer I can still remember, and it threw me: 'Hey, I'm here to find out what's wrong with me, but everyone knows that, and everyone tells me I'm in deep trouble,' he said. 'No one wants to know *my* story, though. They just want to satisfy themselves that they're smart, and they already know everything there is to

know. I feel like telling them to stop jumping to their answers, and first give me a break!'

"Right away, of course, I came back at him; I said, 'All right, *you* tell *me* what to think, and I'll try not to "jump" you with some "answer"—*you* tell me the answer.' A second later, he replied, 'Mister doctor, I've got a story to give you, if you want to hear it.' So, I glanced at my watch, and he caught me—warned me: 'It's a *long* story.' By the time he'd finished, I'd been all ears, and I knew him in a way I'd not have known him if I'd gone through my list of questions, satisfied myself I'd heard the right answers, and then folded his chart and told him we'd be back in touch—our way of not facing our own problems: how little time we had for all the kids like him we 'saw,' but couldn't 'see' with the intensity and regularity they really needed."

"Jimmy Joe revealed to me so much, and in such a moving way, that I wanted to hear more—about his skipping school, his fights, the times he'd run away from home. I wanted to know him well. How I wished I could get connected to him, the way you feel when you have a good conversation with someone. Years later, as I've thought about him and others I've worked with here, I've realized that we sometimes work hard, with our clinical language, to avoid having those conversations with the kids who come here. Yet each one comes with a story, as Jimmy Joe taught me."

A couple of hours later, as I got up to go, Dr. Clark was at pains to wish me well in my efforts, to volunteer further help, and to offer, also, a few words of advice: "I know you're worried about all the variables you've mentioned—about race and class and regional differences in language and attitude. I hope the research goes well for you. I guess I hope those kids down there get to you, so you'll hear them 'level' with

you. Remember, southerners are storytellers, and lots of us ‘colored folks’ down there have always been pretty good at storytelling. So that can go a long way for you. It’ll mean a lot to those children if you let them know you’re down there to learn from them, learn what they know to tell you about their lives.”

That memorable conversation with the Clarks would echo in my head over the years as I sought to meet children not in clinics or hospitals, but in their schools and homes. Here were youngsters experiencing a region’s—a nation’s—great social, racial, and political turmoil, often at schools surrounded by hostile mobs morning and afternoon. And there I was, trying to get a handle on what they made of a world come apart and turned scary, to the point that even their teachers had to approach or depart from school buildings with apprehension and at considerable risk.

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*“It’ll mean a lot to those children if you let them know you’re down there to learn from them, learn what they know to tell you about their lives.”*

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Where once I had my clinical questions to pose, now I was asking students and teachers how things were going. These were not would-be patients; they were ordinary people, young and middle-aged, who had suddenly been visited by history in the making. And, as Dr. Clark had suggested, they had stories to tell, based on their daily experiences. They had learned to tell those stories, to speak of what they’d seen and heard, and to describe events unfolding in their very midst. Initially, I was tempted to probe and probe for their fears and anxieties. This posed less a problem for them, I only gradually began to realize, than for me, who single-mindedly pursued one aspect of their emotional lives, while neglecting other concerns, feelings, and sentiments they harbored.

The more time I spent with those young African American and white southerners, and their parents and teachers, in Louisiana and Georgia first, then in Alabama and Mississippi and the Carolinas, the more helpful Dr. Clark’s advice turned out to be. Indeed, I was nudged toward his words, every so often, by the children themselves. As I talked with them, I tried to learn of their lives, their fears for sure, but also their aspirations and hopes.

Again and again, moments of silence, of perplexed reticence (faces registering questions such as, *Who is this man, what does he want to know, and why?*) yielded to a casual narrative intent that told me a great deal about specific moments and events, but also began to reveal to me much about myself. My own mind’s interests, its education—maybe *its* problems—came clearer as I sought to understand the difficulties that these children and parents and teachers had to encounter as they struggled with the desegregation crisis.

Eventually, as I wrote about the work I did during that time of change, I referred to those boys and girls as “children of crisis.” In retrospect, I’m not at all sure that I wasn’t then one of them—a young doctor trying to figure out what *he* was doing, and *why*, and in *which* way, for what overall reasons. There was no question that Dr. Clark’s counsel helped considerably; but so did various unexpected or surprising moments—occasions, here and there, now and then, that decisively shaped my reflecting, inquiring mind.

In 1962, for instance, I’d spent a few hours talking with Tessie Provost, one of the four six-year-old African American children who braved fiercely truculent, vociferous mobs in order to become a first grader at New Orleans’s McDonogh 19 Elementary School. I then heard this from her always hospitable grandmother (coffee and cake at each home visit!): “Tessie is doing okay, and I know she enjoys your coming here to see us, but she’s worried that she doesn’t have the right answers for you sometimes.”

I was taken aback; I immediately reassured this elderly, gracious, and ever-so-savvy observer of the human scene (she worked in a fancy “Garden District” New Orleans house, and missed little that went on there psychologically). I declared myself



photo courtesy of Corbis/Bettmann

African American children register for school. In 1960, the school boards of New Orleans and Atlanta selected the first two groups of African American children to start desegregation. Federal marshals had to escort the children to class. The children faced mobs, the near emptying of schools, the constant threat of violence, and international media attention.



After 35 years, child psychiatrist Robert Coles is reunited with Ruby Bridges, the first African American to integrate her New Orleans elementary school. To reach her new school in September 1960, the six-year-old Bridges had to walk through crowds of people shouting death threats. That same fall, Coles, then a young Air Force doctor on his way to a medical conference in town, was cut off by the angry mob outside Bridges's school. Coles—who had researched the effects of stress on children during a residency at Children's Hospital in Boston—wondered how the experience was affecting the little girl. He ended up staying three years to study the effects of desegregation.



photo by Paul Horton

exceedingly grateful for a chance to speak with Tessie and her family, and I spoke of how helpful this child had been in letting me know what was happening to her and her classmates at a much-beleaguered school.

In reply, I heard this: "Our Tessie is coming along fine: she's taught us all what a girl who's only six can do, and she's become a soldier for our people, I keep telling her. 'You're living out a story,' I say to her, and she smiles. She sleeps sound and eats real good, and she's got a big smile on her face when I gab with her. If you spot anything going bad or wrong, please let us know, but if she keeps going along like she's been doing, then that'll be what there is for you to tell folks, the doctors."

I was yet again taken aback, now by those concluding words. Yes, I'd gone into my explanations with her, with Tessie's mother and father, with Tessie herself, with so many others—children, parents, relatives—about my research, my doctor's desire to learn. Until then, however, I hadn't had my job and purpose described by those I was studying. No wonder Dr. Clark came quickly to mind.

My storytelling as a medical observer would thereafter begin to take priority as I kept seeing Tessie and her grandmother and others in New Orleans. By then I'd told the children, anyway, that what they had to say to me I'd try to convey to others.

They had, indeed, become skilled storytellers, capable of communicating details that had become dramatic turns of fate or circumstance. They were also able to let me know of accidents and incidents; they were young chroniclers anxious to fit together events, link them to time and place.

These were the same children with whom I'd learned to sit and read books—another big boost given my work by Dr. Clark, who had suggested such an approach to "get by the barriers of race and age." I brought books with me and, as I went from home to home, discussed with those children topics mentioned in the stories we read and in the stories of their ongoing lives. I had been trained to filter what they said, or didn't say, through clinical terminology and psychiatric classifications—yet, finally, I saw what Tessie's grandmother had described as desirable that I heed: young storytellers who kept speaking as participants in a nation's moral and educational transformation.

I was learning a lesson about the ways in which children not only weather social or political storms, or personal ones, but sometimes also make history and relate it as storytellers. I still had medical and psychological facts to ascertain, of course, as I dealt with the specific fears or worries of certain children and the manner in which their minds dealt with those

apprehensions. But I also learned something else—how vividly and accurately children can take note of the world around them, how well they can fit what they discover and observe into descriptive comments and rendered opinions. I learned from boys and girls as watchful reporters of, listeners to, the world they inhabited in a home, a neighborhood, a school, a city's streets and buses. In a sense, the close attention those children paid to their experiences and the way in which they put them into words and wove them into stories were aspects of their healing.

"I feel better now that I know the score there," Tessie once told me after we'd been discussing what had happened to her at a newly desegregated school. What she had come to understand—her own perceptions and unearthings, her own thoughts as they came to her for notice and consideration—became for her a kind of restorative, remedial activity. This she knew to indicate, to suggest in an almost offhand, yet ever so significant aside: the child as, not rarely, a casual self-healer who knew how to feel better, to take stock of herself, her situation, amid the troubles that a city's crisis had brought her way. ❧

*Robert Coles is professor of psychiatry and medical humanities at HMS and the James Agee Professor of Social Ethics at Harvard University.*

# Learning from the

by Sarah Lapey

**A**T HMS, THE TRADITIONAL *pediatrics and obstetrics/gynecology rotations are combined into a single three-month clerkship in women's and children's health. During this clerkship, students explore not only women's and children's medical needs, but also the social factors that affect their health.*

*Midway through the rotation, the students gather for a week-long course on the socioeconomic issues surrounding maternal and child health. Last fall, students were asked to choose a patient whom they encountered early in their first clinical block. The students investigated the social, economic, or policy influences on that patient's health care, and then presented in poster form their research and reflections. During her clerkship, Sarah Lapey, a third-year student, chose to investigate the impact of a long-term pediatric illness.*

I had just completed my surgery rotation, during which I had tried to acquire the art of efficient decision-making and a pristine operative technique, when I found myself in a new world. This was a place of bald-headed girls and boys in baseball hats and tired but outwardly cheerful family members camped out on cots. A playroom filled with colorful toys and pictures contrasted sharply with the pale, thin children who were overshadowed by IV poles and chemotherapy pumps as they crept along the vast corridors.

During my Women's and Children's Health clerkship, my first patients were all children with some form of cancer. There was the 16-year-old with metastatic osteosarcoma in her femur, a girl whose mother and stepfather were always at her side with takeout food and videos and whose

stepfather had recently shaved his head in solidarity. There was the ten-year-old girl in Adidas sweatpants and Nikes who had a primitive neuroectodermal tumor in her chest wall. In for another chemo cycle, she was hoping to finish early so she could play in a soccer game.

Each day brought several admissions of children in different stages of cancer. These kids were always accompanied by a procession of family members. Battle-worn parents marched in front, armed with supplies to counteract hospital monotony: stuffed animals, boxes of Dunkin' Donuts, crayons and drawing paper, and beads for making geckos, a recent trend on the pediatric floor. These lizard-like creatures, either sold or given to other patients or hospital personnel, were developing quite a presence as they dangled from IV poles and stethoscopes. On my second day on the wards, I inherited "Tanga," an orange and white gecko who eased my transition, at least outwardly, into this new rotation.

Amid the shifting cast of travelers through the wards, I also saw some seemingly permanent residents, such as the nine-month-old girl with an immunodeficiency disease and a problem list encompassing every organ system. Only residents saw her in the isolation room, although early one morning I joined an intern in the elaborate gowning and gloving rituals so I could interpret for the English-speaking team and Spanish-speaking mother. As I gazed at this jaundiced, whimpering baby, her body pierced by numerous IVs and tubes, I felt relieved to be serving merely a translating role. I had all the same questions as her mother and knew few answers.

I dealt with my initial insecurities by immersing myself in my patients' diseases, learning all I could about each cancer—the etiology, presenting signs and symptoms, treatment, and prognosis. Such was the language of our daily rounds and conferences: we deliberated over the genetic mechanisms underlying the pathogenesis of each condition, the action of chemotherapeutic agents, the latest treatments.

My attempts to learn pathophysiological processes also formed the basis for the questions I asked on my daily visits. I asked my patients how they were doing and tried to separate the symptoms of their illnesses from the side effects of their medications. Fever, nausea, vomiting, abdominal or flank pain, blood in their urine? I felt ill-equipped to inquire deeper into their overall state of coping, because I was uncertain how to offer support or guidance.

I wondered about the impact of a long-term pediatric illness—how patients responded to their conditions and whence they derived their strength. So during my clerkship, I chose to work closely with a nine-year-old girl whose acute leukemia was superimposed over sickle-cell disease. She had just completed a 130-week chemotherapy regimen the week before admission and had come to the hospital because she "didn't feel right"—she had fever, chills, myalgias, and headache. Our plan was to admit her to rule out sepsis of her central venous line.

Upon entering the patient's room, I found a small, thin black girl with huge eyes and a frightened look on her face. While she tossed and turned in bed, I spoke with her mother about her numerous hospitalizations and her



# Youngest Patients

most recent chemotherapy regimen with its many complications, including episodes of fever and neutropenia.

This girl had spent much of her life in the hospital and was well known by the health care staff. Yet, at the same time, she was a popular fifth-grader who lived at home with her mother, a younger sister, and a cat. Her mother had stopped working when her daughter developed leukemia. The mother's description of her own emotional response to this new life-threatening condition far outweighed what I could learn through my independent readings: denial, anger, depression, a grieving over the fragile health of her child. The mother was suffering indescribable emotional and financial strains, but she showed a remarkable spirit of perseverance. She drew on external support systems, including her church and her own mother, and recognized that she had to be strong and steadfast to prevent her daughter from losing hope.

The health care team spent time educating the mother about her daughter's condition, treatments, and prognosis; they also taught the girl about her illness in easy-to-understand terms. Although admitting that at first she had felt so overwhelmed she couldn't retain much information, the mother soon became an expert on her daughter's health. At the same time, she strove to downplay the focus on the disease and encouraged her daughter to live as normal a life as possible. I soon realized that such a normalization of activities was one of the most effective coping mechanisms. The girl continued to attend school. When chemotherapy or its complications required her to miss school, she received tutoring in the hospital or at home, which kept her from falling behind her classmates.

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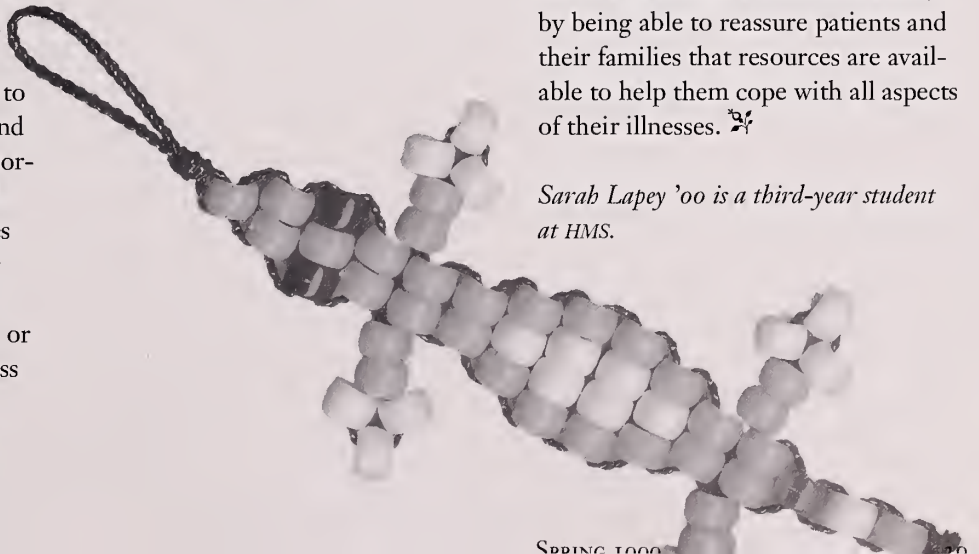
The hospital offered other help to both mother and daughter, including counseling, play therapy, and relaxation therapy. And when my patient lost all her hair and was ridiculed by some of her classmates, her health care team sent a child life specialist to the school, to show the girl's classmates a Charlie Brown video that explained cancer and chemotherapy. This intervention resulted in better understanding and more empathic behavior.

I read up on chronic pediatric illnesses and learned that numerous studies have documented an increased prevalence of psychopathology in hospitalized children. One study found, for example, that only 12 percent of children with chronic medical conditions have a purely physical diagnosis; most have both physical and psychological problems. Clearly it is not enough to focus treatment merely on the physical diagnosis; psychological and emotional complaints must also be addressed, as well as ways to prevent these negative effects.

My clerkship, greatly enriched by my relationship with this patient and her mother, gave me the chance to explore the psychosocial aspects that so deeply color the health of children and families everywhere. I realized that, despite everything, my patient has been able to lead a close-to-normal life and continues along her developmental pathway as a creative, unique child.

My experience with this young girl also helped me overcome the underlying discomfort I'd felt when confronted by children with life-threatening conditions. I now feel much more confident in my ability to care for children in the fullest sense, by being able to reassure patients and their families that resources are available to help them cope with all aspects of their illnesses. 🌿

*Sarah Lapey '00 is a third-year student at HMS.*



# Pediatric Care Fifty Years Ago

*by Lewis Barness*

**T**ODAY'S INTERNS WOULD NOT recognize pediatric practice of even 50 years ago. They would be startled to see hospitals filled with acutely ill infants, open wards with as many as 20 beds, and parents subjected to strictly limited visiting hours, unless a child's death was imminent.

Contemporary practitioners can only imagine the intensity we felt when serving as interns in the 1940s. Most of us were single and nearly all of us were male. It was not uncommon for department chairmen to advise against marriage. Inasmuch as there were more interns than slots, the chairman's word was law.

We were generally on call every other night, and on nights off we tended to be busy until around 10:00 P.M. We were expected to perform most of the laboratory work on our own patients; occasionally, we were able to persuade a medical student to do some of the work.

Pediatricians at that time were usually solo practitioners who provided care in their offices or in their patients' homes. Most were competent physi-

cians who almost daily practiced procedures now considered risky. They would routinely perform myringotomies of infected ears, for example, and they would maintain intravenous fluids and exchange transfusions for Rh incompatibility.

Today's emphasis on understanding and maintaining children's health in a broad context of wellness and preventive care had not yet entered mainstream practice in the 1940s. A premium was set instead on knowledge, diagnosis, and differential diagnosis. The most outstanding role model for this was Sydney Gellis, at that time director of the outpatient clinic at Children's Hospital in Boston. We interns trailed after him to catch the pearls of wisdom he dropped. He pointed out the triangular patch of red on the tongue that indicated typhoid, for example, as well as the black line around the gums that revealed lead poisoning.

While this unwavering focus on diagnosis may seem narrow from today's perspective, it led to many significant medical breakthroughs. Practitioners from that era paved the way

for new therapeutic and surgical techniques, vaccines, medications, and disease prevention strategies. These advances, many of which we take for granted today, have dramatically improved the health of succeeding generations of children.

The advent of oral rehydration therapy, for example, which grew out of the recognition that administering sodium and chloride together could improve water absorption, saved many lives and emptied many hospital wards. Before World War II, infant wards were filled with row upon row of diarrhea-plagued infants hooked up to open burettes that dripped fluid into their veins. Little regard was paid to keeping the fluids sterile. During the war, James Gamble, Allan Butler, and Daniel Darrow developed the basis for successful parenteral fluid therapy. Still, measurements of serum electrolytes were taken slowly and gravimetrically until Gamble and William Wallace helped develop a flame photometer to measure the electrolytes accurately. Thanks to their pioneering efforts, we received chemical results in hours instead of days.





Fifty years ago, a frantic call from a parent or police officer that an infant was choking usually meant diphtheria. We would order an ambulance ride and a quick tracheotomy. Diphtheria, pertussis, and tetanus vaccines were available but frequently overlooked. Vaccines were later developed against measles, mumps, and rubella. The rubella syndrome—another nightmare of parents and pediatricians—has since disappeared, while measles and mumps are now diagnosed only rarely. Many new doctors miss the diagnoses of these diseases which, earlier in the century, had been commonplace among children.

Every summer in the decades leading up to mid-century, hospital wards would fill with victims of polio, the infectious scourge everyone most dreaded. Our fear of the awful consequences of polio was compounded by uncertainty about its cause. Inferences about its etiology were often wrong. One popular theory, for example, was that polio was caused by a shellfish

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*One popular theory was that polio was caused by a shellfish toxin, and various antitoxins were prescribed.*

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toxin, and various antitoxins were prescribed. Some of the treatments were downright frightening, such as the rigid casting of the child at the height of fever. We also could hear the clanking of the Drinker respirator—the iron lung, which had first been built in the Harvard machine shop in the late 1920s—well out into the streets.

In 1948, John Enders, Thomas Weller, and Frederick Robbins began growing the polio virus in tissue cul-

ture; their work laid the groundwork for the later development of the Salk and Sabin vaccines. As a result, few pediatricians practicing in the past two decades would even be able to recognize a case of poliomyelitis.

Tuberculosis was always a cause for fear, for it could easily spread from a coughing adult. But those of us in pediatrics were rather cavalier, because we believed that tuberculosis was rarely communicable from children, whose coughs were not strong. We began using the streptomycins to treat tuberculosis in the late 1940s.

When we were interns, the only antibiotics we had available were prontosil, whose toxicity limited its use, and sulfanilamide. When sulfanilamide was developed, meningitis became treatable for the first time. Sulfanilamide was also wonderful because after a few excessive doses, renal shutdown would occur and there was no further need for medicine until the kidneys opened. Many of us took advantage of the phenomenon and gave only one or two doses. By contrast, around the same time, rabbit antiserum against hemophilus influenza was developed, but it probably cured no one and even hastened death in a few. This treatment was quickly abandoned. Other drugs followed, some more effective than others.

Several years later, penicillin, which had been discovered in 1928, became available. Penicillin had no renal toxicity, and the standard dose of 5,000 units could cure severe infections.



Philip Drinker, a professor at the Harvard School of Public Health, shows a Children's Hospital nurse how to adjust the collar on an iron lung, a machine he invented in 1928. By 1947, when this photograph was taken, the Drinker respirator had saved the lives of thousands of polio victims.





Children with polio are encased in a five-patient iron lung in Infant's Hospital in Boston. Nurses and doctors could enter the chamber to bathe the patients and give them medical treatment without interfering with the machine.

Initially, because of its limited availability, the urine of treated patients was collected, allegedly to recapture the penicillin, although it is unclear whether the reclaimed product was ever used.

My first experience with penicillin was vicarious. One HMS student, the son of a famous internist, developed staphylococcal pneumonia. The father contacted President Franklin Delano Roosevelt, who sent a bomber to Europe to collect several thousand

units of penicillin. The student was treated and rapidly recovered, a response that was unprecedented for that condition.

In addition to breakthroughs in vaccine and drug therapies, the middle part of the century witnessed the invention of other new disease-fighting techniques. In the late 1940s, for example, Sidney Farber made groundbreaking advances in the battle against leukemia. At that time, most children with leukemia died within four months

of diagnosis. Farber, who believed that folic acid was necessary for cell division, called for the production of antifolate compounds. Aminopterin and other antifolate compounds were developed, many with initially unpromising results. Nonetheless, persistence paid off, marking the beginning of a change in the mortality of children with leukemia, a result that has extended to many cures, even of previously treatment-resistant illnesses.





**Girls in a rheumatic fever ward at the House of the Good Samaritan, a long-term care facility in Boston. Sunshine was one form of therapy for rheumatic fever patients in the 1940s.**

Another deadly childhood disease, cystic fibrosis, first identified only about 60 years ago, used to bring the undertaker within two years of diagnosis. Treatment consisted largely of a low-fat diet, supplemented by intravenous fluids, antibiotics, and chest pummeling. We gave oxygen only when respiratory distress was severe. In the late 1940s, Harry Shwachman and others developed numerous tests that enabled earlier diagnoses and improved treatment.

Rheumatic fever, which had been a devastating disease, particularly in Boston, led to the founding of the House of the Good Samaritan, where Benedict Massell and others cared for hundreds of children with the disease. As interns, we lived in the Good Samaritan for a month-long rotation. I remember speculation about why Boston had such a high prevalence of the disease; conjectures included relatively high rates of poverty, the great number of Irish who were said to be susceptible, and the risk that supposedly stemmed from having red hair. (It is possible that Boston physicians were simply more alert to the diagnosis.)

In 1944, T. Duckett Jones developed criteria for improving diagnosis

of rheumatic fever. The main treatment consisted first of a sulfonamide, then penicillin and aspirin until the child's ears rang intolerably. Adjustment of corticosteroid doses became an art in the early 1950s. Probably not as the result of treatment alone, the character of rheumatic fever has changed so much that old-time pediatricians find it hard to believe that this disease essentially disappeared for several decades, with a recent reappearance.

In the late 1940s, Edward Neuhouser and Richard Wittenborg, astute radiologic clinicians and almost fanatic diagnosticians, helped set the stage for the imaging techniques of today, including ultrasounds, CT scans,



and magnetic resonance imaging. Unfortunately, the development of infant-imaging procedures has led to a decline in physical diagnostic skills on the part of physicians. Those who nowadays dare to percuss a chest or insert a finger in a rectum are shunned as old-fashioned. Ironically, the example of history suggests that those who place inordinate faith in today's imaging procedures also will soon be labeled old-fashioned, as gene analyses expand and even more exquisite diagnostic techniques are developed.

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As we stand poised at the beginning of a new millennium, what lessons for our future might we take away from the experiences of pediatricians in the middle part of the century? When we entered pediatrics at the start of World War II, my colleagues and I expected care to improve so dramatically that the need for pediatricians and other doctors would plummet. Our running joke was that, in 20 years, serious diseases would be almost non-existent, and surgeons would be limited to making cosmetic enhancements or repairing trauma. Although we expected to be needed to care for people with congenital anomalies, we imagined that most physicians would be required primarily for attentive listening and preventive care. Despite great advances in medicine, it is disappointing that the gap between our old dream and modern reality remains so wide.

What we imagined as linear progress has not turned out to be linear at all. The current trend favoring

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*Cystic fibrosis, first identified only about 60 years ago, used to bring the undertaker within two years of diagnosis.*

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breastfeeding marks a major reversal. Before World War II, most infants were successfully nursed by their mothers; rates of nursing then fell dramatically and even now are probably still suboptimal. Malnutrition, child abuse, poor living conditions, and inadequate prenatal care continue to cause considerable suffering. Our ability to prevent premature births seems to have plateaued. The alarming

increases in asthma and obesity in young children and adolescents pose new challenges to our ability to care for our children. New viruses such as HIV and Ebola have emerged, and tuberculosis has seen a resurgence. Diabetes has not yet been conquered. Care of infants and children has improved disappointingly slowly since Benjamin Spock wrote that mothers know more than they think they do.

The arrival of managed care is the single most obvious change in pediatrics over the past decade. Although managed care has highlighted previous inefficiencies in medical practice, some of these inefficiencies have been exaggerated, because the goal has changed from doing everything possible to get the best result, to providing patients with merely adequate care. We interns of the 1940s rue these changes at the same time that we celebrate all the medical advancements.

*Lewis Barness '44 is professor of pediatrics at the University of South Florida.*

Polio patients receiving physical therapy at Children's Hospital in Boston. Hydrotherapy, an important part of treatment for polio patients during the 1940s and 1950s, was provided in a warm-water pool.



# How Do We Want to Be Remembered?

by Joel F. Alpert

**E**ARLY LAST YEAR, A 22-YEAR-OLD African American mother took her four-day-old newborn to a Brooklyn hospital for the infant's scheduled checkup. The hospital turned the mother away because she had neither a Medicaid card for her infant nor \$25. She was referred to a nearby welfare office but chose not to go because of previous negative experiences; moreover, her infant seemed content and, as best she could tell, was nursing satisfactorily. Four weeks later, the infant died of malnutrition. The mother was arrested and charged with manslaughter.

During the mother's trial, pediatricians testified that the signs of inadequate breast milk can be missed and, even in the best of circumstances, nursing infants must be monitored, which includes examination and weighing. The charges were dismissed. What cannot be dismissed, though, is an especially tragic and preventable death.

A second nursing infant died last fall at the age of six weeks. The mother, also from New York State and also African American, had tried to enroll in Medicaid during her third trimester but failed because of a combination of bureaucratic and computer

errors. She was denied postpartum follow-up. After the infant's death, she too was arrested and charged with manslaughter. She has since been convicted of negligent homicide. The week after her infant died, she received two Medicaid cards in the mail.

In contrast, my daughter took her infant son to his pediatrician for his four-day-old checkup. Examination revealed that Joshua had lost 14 percent of his body weight. He promptly received formula. The next day, Deborah's milk came in and Joshua, ten ounces to the better, was back on the road to health, which every family has a right to expect. The difference between my daughter and the other mothers is that Deborah faced no financial or other barriers to care.

It is unconscionable that the United States remains the only industrialized nation that does not insure all of its people. "Unconscionable" is a word I find myself using frequently these days, because our country—the world's most powerful democracy, in the midst of the longest, most sustained economic expansion in modern history—largely ignores the plight of 43 million uninsured Americans, almost 12 million of whom are children.

How can I say that American children are ignored? After all, the Balanced Budget Act of 1997 established the State Children's Health Insurance Program (SCHIP) and provided \$48 billion over the next ten years to insure 3 to 4 million children, or one-third of the uninsured children in this country. SCHIP, which targets uninsured children of the working poor who are Medicaid ineligible, represents the largest infusion of dollars into child health since Medicaid began. When combined with the 4 to 5 million Medicaid-eligible but unenrolled children, SCHIP could decrease the numbers of uninsured children by two-thirds. So what is wrong with providing children and their families insurance through Medicaid and SCHIP, especially since Medicaid provides health insurance for almost one in four children?

First, a number of barriers—including race, language, culture, and geography—often hamper the ability of Medicaid recipients to overcome bureaucratic hurdles and cumbersome enrollment procedures. Even when these barriers are overcome, eligibility must be demonstrated anew, because enrollment is time limited. And, unlike Medicare, Medicaid and SCHIP require





parents to demonstrate their income eligibility through means testing, which varies by location and income, and which is why we count millions of eligible but unenrolled children among the uninsured. In addition, our country has more than 50 Medicaid and SCHIP programs with different eligibility standards and enrollment procedures.

To date, despite the best efforts of advocates, after one year only 6,000 of 150,000 eligible children in Illinois have been enrolled in Medicaid, as have only 250,000 of 700,000 eligible children in New York State. And during the same time period, the Medicaid rolls in New York decreased by 260,000. This failure to enroll is being repeated in state after state for reasons not fully understood but which certainly include burdensome enrollment procedures, lack of knowledge, and fear of welfare.

Thirty years after Medicaid began, we continue to have not only more uninsured children, but also more children growing up in poverty. In fact, child poverty has increased since the 1960s from 14 percent to 27 percent—the highest percentage in the industrialized world.

In contrast, in the three decades that Medicare has provided elderly Americans with universal coverage, poverty among the elderly has decreased from 32 percent to 11 percent. Medicare has, in large part, eliminated the disparities in access to medical care historically associated with socioeconomic status. Today, Medicare has many problems, such as the need to ensure its solvency and to provide seniors with adequate prescription drug benefits. Yet I am confident that these issues will be addressed, since senior citizens vote. And imagine, for the moment, that it was the elderly instead of children who were subjected to Medicaid restric-

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tions. Would we be talking today about programs that would insure, at best, two-thirds of the uninsured elderly? If so, we wouldn't need term limits. Politicians would be quickly voted out of office.

Medicare for the disabled offers yet another illustration. As part of the Balanced Budget Act of 1997, a Medicare program for the impoverished elderly and disabled was established in which the monthly premium for out-of-hospital physician care can be waived. Only 16,000 of the 500,000 eligible nationally have enrolled, undoubtedly in part because of poor publicity, since the states have no financial incentive to enroll people. This new program also has the same enrollment barriers as SCHIP and Medicaid. The individual must go to the state welfare office to enroll and, when finally accepted, is placed on Medicaid. And, make no mistake, many elderly recognize Medicaid as a welfare program rather than an entitlement like Medicare. People who have worked all of their lives resist, to the extent they can, ending their lives on welfare.

In 1988, the American Academy of Pediatrics (AAP) developed Children First, a universal coverage plan for children that would have relied ini-

tially on a public-private partnership for financing. In 1992, the AAP, believing that health reform was likely, signed on as a supporter of President Clinton's health reform plan. But public support for health care reform waned as a result of a secretive process and a complicated, poorly understood plan. In addition, small businesses joined with the insurance industry to conduct a brilliant advertising campaign against reform. Control and choice were lost, but because of the marketplace rather than government.

Incrementalism is said to be the American way. Incrementalism means that someone will always be left out, and this creates its own competition. Children First, for example, included children and young adults—from birth to age 21—and pregnant women. Today we debate who should get insurance next. What about those between the ages of 21 and 30, a group that includes 30 percent of the uninsured? What about the disabled? Or those between the ages of 55 and 64?

In March of this year, a *New York Times* article presented the view that children are the ones in this country who least need health insurance. The article reported that children are generally healthier than adults; when children get sick, they are cheaper to treat; and they have already been singled out by SCHIP.

The article's facts are right. Children *are* generally healthier. Children *are* less expensive to treat, and certainly the comprehensive benefits package for children costs less than the equivalent package for adults. In a 1998 study, the AAP found that a comprehensive benefits package—including dental care—for all children would cost about \$1,200 a year per child—far less than the \$8,000 a year per Medicare enrollee, or the non-elderly adult cost of \$3,000 a year. Although children make up 75 percent of Medi-



caid beneficiaries, they consume only about 25 percent of the dollars.

We know that children with health insurance receive more medical care, are healthier during childhood, and become healthier adults. If incrementalism continues, children should be the next group to receive universal health insurance, not only because they are less expensive to cover, but also because they represent our nation's future.

The issue is not dollars. Our country spends 100 percent more on health care than any other industrialized nation—more than \$2 billion a day, more than \$1 trillion a year, and we are heading for \$4 billion a day and \$2 trillion a year within a decade. If we continue in our current direction, we will soon have 63 million uninsured Americans and 70 million underinsured, with increasing numbers of children in both categories. If we continue to ignore the need for universal health insurance, we will continue to violate our most democratic traditions of fairness.

In resolving this crisis, we must remember that even when we elimi-

nate financial barriers, other barriers will remain. Our government safety net for children provides less relief than those in other industrialized nations. Children in this wealthy country go hungry and are neglected. We have an epidemic of violence, especially due to guns. Our infant mortality rate places us 23rd in the world, and in a study of 11 industrialized nations, we ranked last in providing access to primary care.

How are we to provide universal coverage? Government already plays a substantial role in health care. There are also other major players. Earlier this year, headlines announced Aetna's proposed purchase of Prudential, raising concerns that Aetna was seeking to dominate the health care insurance industry. Whose shareholders will hold us accountable? Will it be Aetna and its stockholders or the government and its stockholders? The government's stockholders—the people—have a different bottom line—the quality of services. It is time for physicians to place ourselves at the forefront

to demand that our elected leaders take the necessary actions to insure all children. Then we can turn our energies and talents to addressing other barriers.

We have enough challenges to keep us busy for generations to come. If we have the will, we can solve the challenge of financial barriers to health care for America's children in a few short years. We have a choice. We can be remembered as the nation, the generation, the society, and yes, the profession that sat idly by when two infants died while their mothers tried to get them care. Or we can be known as the generation and the profession that eliminated the problem of the uninsured. We must be leaders in demanding of our government and society that children, and ultimately all Americans, receive health care coverage and quality health care as a basic human right. ❁

*Joel J. Alpert '56 is president of the American Academy of Pediatrics and professor of pediatrics and public health at the Boston University School of Medicine.*





# BASEBALL RULES

*by James S. Distelhorst*





**"The American National Game of Baseball,"** a lithograph by Currier and Ives (1866), depicts Elysian Fields in Hoboken, New Jersey. On June 19, 1846, in the first documented baseball game, the New York Knickerbockers played against the New York Nines at Elysian Fields. The Knickerbockers lost, 23 to 1.

York Knickerbocker Base Ball Club, Adams played against the New York Nine at Elysian Fields in Hoboken, New Jersey. Although his team was overmatched, losing 23 to 1, he went on to become known as a father of baseball.

Institutions often have their own creation myths, wherein they reinterpret their pasts in such a way as to make a crucial point about their identities, and baseball is no exception. Most fans associate the founding of baseball with Abner Doubleday in Cooperstown, New York. The legend goes that, in Cooperstown in 1839, Doubleday plotted out for the first time what we would today recognize as a baseball field. Yet Doubleday, destined to become a Civil War hero, was then a West Point student. He is not known even to have set foot in Cooperstown during that entire year. In addition, Doubleday never mentions baseball in his voluminous journals. Nonetheless, in 1908, a committee appointed by the baseball establishment officially sanctioned the Doubleday creation myth of baseball because it erroneously confirmed the American origins of the game during a period of political isolationism, and because it supported the financial interests of certain committee members.

## *"I see great things in baseball,"*

Walt Whitman wrote in 1846. "It's our game—the American game. It will take our people out-of-doors, fill them with oxygen, give them a larger physical stoicism. Tend to relieve us from being a nervous, dyspeptic set. Repair these losses, and be a blessing to us."

The same year that Whitman wrote about the medicinal value of baseball, a man at the intersection of medicine and baseball—Daniel Lucius "Doc" Adams, an 1838 graduate of HMS—played in the sport's first documented game. A member of the New





**Daniel Lucius "Doc" Adams**

photo by John Richmond Husman,  
courtesy of Mrs. Daniel P. Adams

Virtually all baseball historians now reject the Doubleday story. In fact, it was the young urban professionals of mid-nineteenth-century New York City—the Knickerbockers—who began to fashion their game into what would become the baseball of Babe Ruth, Joe DiMaggio, Ted Williams, Roberto Clemente, Carl Yastrzemski, Roger Clemens, and Ken Griffey, Jr. And the Knickerbockers were led during their formative years by Doc Adams.

Daniel Lucius Adams was born November 1, 1814 in Mount Vernon, New Hampshire. The son of a physician, he was graduated from Yale in 1835 after transferring from Amherst College. After his HMS graduation, he

practiced briefly with his father in New Hampshire. In 1839, he moved to what is now the East Village of New York City to establish his own general practice. There he also treated the poor in the New York Dispensary, which provided free medical, surgical, and dental aid.

Soon after arriving in New York, Adams began playing baseball. In the fall of 1845, several weeks after the formal organization of the Knickerbocker Base Ball Club, he and several physician-friends joined the team. The club elected him vice president in 1846, the year of the first documented game of baseball. A year later he was elected president, a position he held for three years.

The Knickerbockers rented a playing area at Elysian Fields for \$75 a year. "Once there we were free from all restraint," Adams said, "and throwing off our coats we played until it was too dark to see any longer. I was a left-handed batter, and sometimes used to [hit] the ball into the river. People began to take an interest in the game presently, and sometimes we had as many as a hundred spectators watching.

"The first professional English cricket team that came to this country...used to come over and watch our game," Adams added. "They rather turned up their noses at it, and thought it tame sport, until we invited them to try it. Then they found it was not so easy as it looked."

The Knickerbockers, who each paid a two-dollar initiation fee and five dollars in annual dues, emphasized gentlemanly behavior. Fines were imposed for using profanity (6-1/4 cents), arguing with the umpire's decision (25 cents), and disobeying the team captain (50 cents). After each game, whatever the outcome, the Knickerbockers treated the visiting team to a gala dinner.

Within the next few years, other young professional men organized similar clubs, copying the Knickerbockers' bylaws and even their uniforms. The Knickerbockers wore white flannel shirts, blue woolen pantaloons, and straw hats. The Eclectic Club adopted white shirts and caps with blue trim, blue flannel pantaloons, and red belts; the Brooklyn Charter Oaks wore pink shirts with white stars, white pantaloons with pink stripes, and blue-peaked white caps.

During those formative years of baseball, the Knicks, as they called themselves, were the most organized and therefore the most influential of the baseball clubs. For more than ten years, they virtually ruled baseball;



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*Fines were imposed for using profanity (6-1/4 cents), arguing with the umpire's decision (25 cents), and disobeying the team captain (50 cents).*

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when they changed their rules, other clubs followed.

Adams made a major contribution to the game when he increased the number of fielders from eight to nine by adding a “short fielder”—himself—to play in the shallow outfield. His original goal had not been to convert potential singles into groundouts, but to use the position to relay throws from the outfield to the infield. Then, when the balls became harder by being wound more tightly, they could be both hit and thrown farther. And so Adams, the short fielder, moved closer to the infield, and eventually became what we now recognize as the shortstop. This new player pushed the second baseman toward first base into his present position.

In fact, the person winding all the baseballs was Adams himself. “We had a great deal of trouble in getting balls made,” he said, “and for six or seven years I made all the balls myself, not only for our club but for other clubs when they were organized. I went all over New York to find someone who would undertake this work, but no one could be induced to try it for love or money. Finally, I found a Scotch saddler who was able to show me a good way to cover the balls with horsehide, such as was used for whiplashes. I used to make the stuffing out of three or four ounces of rubber cuttings, wound with yarn and then covered with the leather.”

During his second term as Knickerbocker president, from 1856 to 1858, Adams was elected presiding officer of the first convention of the 12 organized baseball clubs, which was held in a New York hotel in 1857. He also chaired the rules committee and drafted the first thorough revision of the Knickerbockers’ original bylaws. He is credited with several important rule changes at that time.

The only official stipulation of the baseball diamond’s dimensions, for example, required that the infield diagonal between home and second base measure “42 paces equidistant.” Adams was the first to fix the distance between bases at 90 feet, where it remains today. The distance from home plate to the pitcher’s base was set at 45 feet.

Adams also proposed changing the winner of the game to be the team that led after seven innings, rather than the first team to score 21 runs, as it had been previously. The number of innings was later changed to nine.

As the chair of the Committee on Rules and Regulations, Adams also supported the “fly game,” which required a fly ball to be caught in the air—not, as the original regulation stated, on the first bounce—in order to count as an out. Ultimately his view prevailed.



photo courtesy of the National Baseball Hall of Fame Library, Cooperstown, New York

By the time Doc Adams retired from the Knickerbockers in 1862, the team had become thoroughly professionalized. Pictured above is a Knickerbocker posing for a team photo taken in 1864.

The following year, a second convention was held, with 22 clubs represented. They agreed to form the National Association of Base Ball Players, even though the teams were all from New York City. The clubs also agreed that players should be neither compensated for playing nor allowed to bet on games in which they played.

In 1861, Adams married Cornelia Cook. He later called his marriage “the crowning achievement of my life.” In addition to having two daughters, they had two sons, with whom Adams played baseball in the backyard into his seventies.

In 1862, after 16 years with the club, including 12 as an officer, Adams retired from the Knickerbockers. The club named him, in the classical idiom of the time, the “Nestor of Ball Players,” recalling the king of Pylos, who served as counselor to the Greeks at Troy. The Knickerbocker Club itself disbanded just ten years later, after

baseball had become thoroughly professionalized.

In 1865, Doc Adams retired from medical practice for health reasons. Nonetheless, he lived for 34 more years, remaining active in banking in Ridgefield, Connecticut, and then moving in 1888 to New Haven, where he died in 1899.

Baseball historians agree in recognizing the contributions Doc Adams made to the game: Fred Ivor-Campbell calls him “the Nurturing Father of Baseball,” while John Thorn calls him the “first among the Fathers of Baseball.”

And when Doc Adams left the Knickerbockers, it was not, he said, “before thousands were present to witness matches and any number of outside players [were] standing ready to take a hand on regular playing days. We pioneers never expected to see the game so universal as it has...become.” ❁

*James S. Distelhorst '79 lives in Seattle, where he is a family physician, a medical administrator, and a Mariners season ticket holder. He remembers playing baseball in the Quad on spring afternoons after Saturday classes, hitting pop flies with his Roberto Clemente bat to classmates Ed Supple and Betty Anne Johnson.*

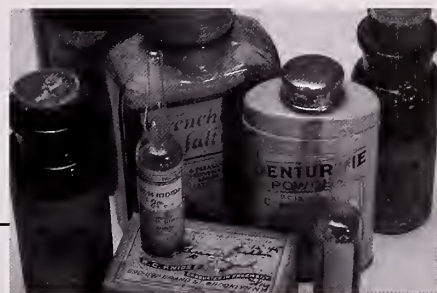
*The author wishes to thank the following for their help in researching this article: John R. Husman, John Thorn, and Kenneth Shouler, who also supplied the portrait of Doc Adams.*

**Six of the original Knickerbockers sit for a daguerreotypist in 1846. Doc Adams is in the center of the front row. Alexander Jay Cartwright, who worked with Doc Adams in refining the rules of baseball, is in the center of the back row. Cartwright, the owner of a book and stationery store, had once been a volunteer fireman with the Knickerbocker Engine Company.**





# TREATING THE KNICKERBOCKERS



WHEN DANIEL LUCIUS “DOC” ADAMS, HMS Class of 1838 and a true baseball immortal, retired from his medical practice in 1865, what sort of practice was he quitting? And what kind of care would he have offered his injured New York Knickerbocker teammates in the mid-nineteenth century?

At the time Adams left medicine, the rules of medical play were in flux. There were competing teams—such as the Thomsonians, homeopaths, and osteopaths—and it was not clear whether the players on the side of “regular” medicine, which evolved into today’s scientific medicine, were winning. Indeed, apart from their social status, there was little to distinguish the methods of the “regular” doctors from those of their competitors.

In regular medicine, a great shift in practice was taking place, largely in the direction of abandoning the “heroic” methods of the preceding century and a half—bleeding, purging, blistering, and the use of toxic chemicals—in favor of milder remedies.

As yet, there was little in the way of “evidence-based” medicine; the rules of evidence were just beginning to be hammered out. But ideas about the body were changing as Claude Bernard’s lessons about the internal milieu became more familiar. The belief that bodily ills resulted from fluxes—unpredictable increases or depletion of vital substances, much influenced by the environment—had been the basis of much medical practice. Recognition that many aspects of

the body were self-regulating undermined efforts to offset these fluxes.

Actual practice of the period, such as that of physician Henry Taylor, was a mix of old-fashioned, aggressive remedies; innocuous herbal treatments; and a modicum of what appears now, as it did then, to be good sense. A few years after Adams’s retirement, Taylor provided insight into the medical practices of that era when he published *Our Family Doctor and General Receipt Book: A Complete and Reliable Guide to the Mysteries of Health, of the Art of Good and Inexpensive Living, and of Household Economy Generally* (Philadelphia: John E. Potter and Company, 1869).

Today’s clinicians would be comfortable with Taylor’s comments on tobacco and his common-sense advocacy of well-lit reading areas, frequent bathing, and exercise. In a foreshadowing of today’s headlines, Taylor regarded “tobacco as one of the greatest enemies of the human family, and indeed of all life; hence no animal but man will touch it.”

Although there was no sports medicine at that time, if one of Adams’s Knickerbocker teammates were to complain of lumbago, “chronic rheumatism in the lumbar region,” Taylor writes that, “blisters have been strongly recommended, and may often be used with advantage; as may also the external use of turpentine and the essential oil of sassafras, mixed with guaiacum [a resin from Haitian trees]. If these fail, the part may be bathed

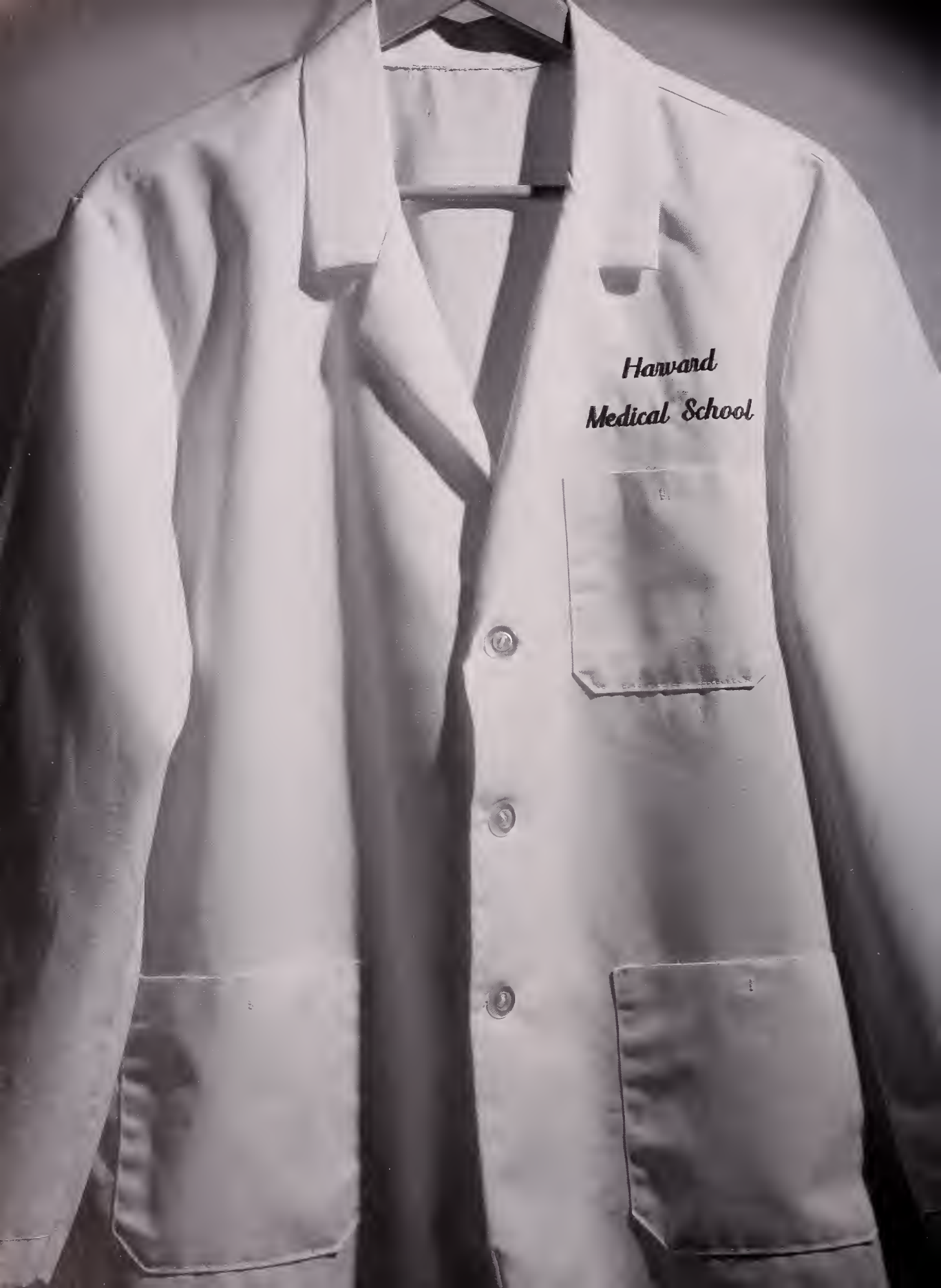
with the tincture of capsicum, [tabasco peppers], or Cayenne pepper.” The same remedy, using a derivative of hot pepper now termed “capsaicin,” has been recently revived to treat some kinds of chronic pain.

If a baseball player were to develop muscle cramps, one treatment option was a nightly dose of a pill composed of half a grain of opium, six grains of rhubarb, and six grains of prepared chalk. “Ten grains of the rust of steel should also be given every morning and noon,” Taylor wrote.

Treatment of sprains, baseball-induced or otherwise, included “cold lotions, such as are composed of three parts of water, one part of spirits of wine, and one part of laudanum [opium tincture]. The part also should be supported with a moderately tight bandage, and perfect rest allowed the limb, if possible.” Indeed, this therapy sounds rather modern until Taylor continues that “it is always proper to apply leeches” to sprains, an intervention he also recommends for bruises.

Thus Adams’s advice to his teammates, according to Taylor, was likely to be consistent in some respects with current treatments—advocating frequent bathing and exercise, prohibiting tobacco, and treating sprains with cold, rest, and compression. Such advice calls to mind the words of another baseball great, Yogi Berra: it’s “déjà vu all over again.”

*James S. Distelhorst ’79*



*Harvard  
Medical School*



# WHITE COAT

by *Ellen Lerner Rothman*

**Y**OU'LL NEVER *EVER* GUESS WHAT I DID," ROY SAID over the phone. He had just returned from a clinic where he followed a physician as he saw his patients.

Roy was the first member of our class to perform a rectal exam. In fact, besides taking blood pressure, it was the first procedure any of us had performed. The gentleman Roy practiced on was subjected to three prostate exams on that particular visit—one from the physician and two from the medical students. But as uncomfortable as the experience must have been for the patient, it was equally awkward for Roy.

When I told my mother about Roy's experience, she was incredulous that the patient permitted such inexperienced hands to probe his prostate. "The patient actually *allowed* that?"

The only way to explain the patient's willingness was Roy's white coat. After several months of wearing mine, I was already accustomed to patient trust way out of proportion to my abilities. Another classmate questioned a patient about his diagnosis. Unfamiliar with the disease, he could only ask, "Um, do you think you could tell me more about what that is?"

The patient replied, "I was hoping *you* could."

...

My classmates and I received our white coats with "Harvard Medical School" embroidered on the breast in crimson curvise on the first day of orientation to medical school in our white coat ceremony. Our event in the Holmes Society was anything but ceremonious. Our class was divided randomly into four different societies, mainly for administrative purposes. Each of the four societies hosted its own ceremony, and we all met afterward for lunch, self-consciously checking one another out in the new and unfamiliar white lab coats. I stood near the end of a long, disorganized line in the Holmes Society office, waiting to receive my coat. By the time I reached the front, all the small coats had been given out, and I received one several sizes too large.

"You can trade with someone," the administrative assistant said.

A day later, wearing our coats still creased from the packaging, we attended our first patient clinic as formal members of the medical world.

The white coat ceremony, a new idea from the administration, was intended to herald our induction into the medical community on our first day of medical school. While

not the long coat of a physician or resident, the white coat signaled our medical affiliation and differentiated us from the civilian visitors and volunteers.

This was not an affiliation I was ready to claim as a first-year medical student. Over the course of the year, after taking courses in anatomy, pharmacology, biochemistry, physiology, genetics, and embryology, I was more deeply impressed by how little I knew than by how much I had learned. Yet every Monday in our Patient/Doctor course I found myself in my white coat interviewing still another patient.

Despite the uncertainty of my place in the medical world, my white coat ushered me into the foreign world of the patient/doctor dynamic. To my patients, the white coat denoted the authority and trust ascribed to physicians by the general public. Most patients were not attuned to the medical hierarchy designated by coat length. A white coat is a white coat is a white coat. Never mind that my coat loudly proclaimed "medical student." I felt as if I wore the scarlet letter, but no one knew what it stood for.

These weekly interviews as part of our Patient/Doctor course were about learning the important questions, the right mannerisms, and the appropriate responses to our patients. Our instructors taught us to take a careful, methodical history, which I more or less skillfully replicated every week with a different patient. Although the goal of these weekly patient interactions was to discover a person's experience of illness, these interviews were more about my learning process than about the patient's story. As I walked with my classmate Andrea back to the medical school from the hospital after a Patient/Doctor session, Andrea remarked, "I hate this. I'm so caught up in figuring out the next question that I can't really focus on the patient's story at all. Do you think this will ever change?"

When I interviewed patients, they saw my white coat. Many of my patients were well into their seventies, and at twenty-two I must have seemed a child to them. The white coat masked my youth. It masked my inexperience. It masked my nervousness. Yet in the medical world my white coat did not offer the solace of anonymity but forced me to take on power that I was not ready to accept.

As a white coat I could ask any question, and patients felt obligated to answer. They trusted me to hear their story without judgment, to understand their symptoms and their suffering, to listen with compassion. I collected information

about their most personal problems and asked them about some of the most deeply private parts of their physical and psychological lives. In return they learned nothing about me.

Furthermore, these weekly interactions imposed power without responsibility. Every week I left the patients' rooms with a few pages of frantically scribbled notes, never to return. Their lives and our interaction were reduced to my chicken scratch. I had no relationship to the patients' care. My continuing obligation to the person was restricted to the requirements of confidentiality.

Before entering medical school, I would not have thought twice about allowing a medical student to perform a rectal exam on me. The white coat would have fooled me too. While I fully appreciated the opportunity afforded me by these patients to learn how to interview and perform simple procedures, I looked forward to a time when I would be able to offer my patients concrete skills. I looked forward to growing into my white coat.

### First Exam

My fingers fumbled to find the pulse of the brachial artery, and I struggled to arrange the blood pressure cuff, my stethoscope, and my patient's arm. "Man, this is the longest setup I've ever had," complained my patient.

"It's my first time," I stammered in reply as I narrowly avoided dropping my blood pressure cuff off the edge of the bed.

Patient/Doctor II was our transition to the clinical world of the hospital. We built on our previous year's experience obtaining a patient's history of illness and experience of disease and incorporated medical observation and diagnosis. We learned to distill a conversation into a medically relevant bullet and to translate a patient's symptoms into clinically important details that pointed to a diagnosis. We learned to tell a clinical story.

With the introduction of the physical exam, the focus of our patient interactions shifted dramatically. It was no longer enough to understand the struggles of being sick and the frustrations of being hospitalized; now we had to determine the patients' cranial nerve deficits and sensory impairments. First year we were expected to extrapolate the human experience of illness from our patients' stories. But second year we learned to transform people into patients.

Masha and I were assigned to be partners for Patient/Doctor that year. Masha was close friends with Andrea, and she exhibited the same emphatic speech and the same urgency about her interests. She was thin, with a narrow figure, and she favored dramatic, trendy clothes.

As Masha and I walked into our patient's room, I wore the same white coat I had worn the year before, slightly less

crisp but still brilliantly white in comparison to the more worn coats of the residents working on the floor. This year I also carried a black camera bag holding my new medical equipment. Grasping the pouch at my hip protectively with my right hand, I was acutely aware of the new weight on my shoulder.

This disgruntled patient was my first clinical experience. Masha and I were expected to take a medical history and perform a complete neurologic examination. What began as an awkward moment that afternoon rapidly degenerated into incredible frustration. Our patient was a thin, wizened man, although only 65 years old. He lay flat on his bed, the blankets barely rising as they spread over his gaunt form. One wrinkled hand with its network of green, knotted veins rested on his stomach. His mouth was slightly opened as he slept, and his cheeks caved in to fill the emptiness of the open mouth. They puffed out slightly each time he exhaled. His fuzzy gray-white eyebrows twitched in his sleep.

Our patient was in the bed closest to the door. The beige curtain was drawn, and we couldn't see the patient in the other bed. Masha and I pulled up two chairs at the side of his bed, scraping them noisily across the floor, hoping that our patient would spontaneously wake up. Our preceptor, Tim, a fourth-year medical student, stood against the wall to observe our history and physical and offer moral support. Later we would present this patient to our physician preceptor.

"Wake him up!" Tim called to us.

I quietly called the patient's name and gingerly shook his shoulder. He woke easily, fixing his sunken icy blue eyes on us.

"They're second-year medical students here to talk to you and do a physical," Tim told him, breaking the awkward pause when neither Masha nor I could think of what to say. Our patient didn't complain. But during the interview he appeared somewhat confused and repeatedly fell asleep mid-sentence. His icy eyes rolled back in their sockets, leaving only the whites of his eyes still visible, and his eyelids fluttered over the blank eyes.

Partway through the interview I noticed that Tim had become preoccupied by the other side of the beige curtain. The next time I looked back, Tim was gone, but other people came in and out of the room. The patient in the next bed had managed to rip out of his four-point restraints and began yelling. In the midst of this chaos our patient woke up, looked at us, and said, "Can you see the mountain ranges in front of me now?"

Masha and I simultaneously turned around to see if there was a poster of mountains on the wall behind us, but we saw only the standard clock, calendar, and charts pinned on the corkboard panel. Our patient discussed the difficulties of



photo by Graham Ramsay



being hospitalized. Then Masha interrupted. "A few minutes ago you said you were seeing mountain ranges," she said. "Can you still see mountain ranges?"

"Shit, man," he said. "I'm not crazy. It was a figure of speech!" I wanted to melt into the floor.

In Patient/Doctor I, where we needed only to talk to the patients to discover their experience of illness, this would have been a notable anecdote for a history composed of any semidirected stories the patient chose to tell. But the responsibility to create a clinical story added urgency. I felt compelled to glean the relevant medical history from this patient's incoherent musings and metaphors. I also knew that at least for now, the physician preceptor who listened to my clinical summary already knew "the answer." So I had better come up with the right story.

Our neurologic exam was no better. Intermittently during the exam the patient's eyes rolled back into his head and he drifted off into sleep, making it nearly impossible to ascertain whether he had appropriate eye movements. We still had half the sensory exam, reflexes, and cerebellar functioning to test when he said, "Are you finished yet? I really have to urinate. Bad." We took our cue and used the opportunity to end the interview.

"It just can't get much worse than that," Tim told us afterward. He then demonstrated damage control for presenting this type of patient. "First of all, you should say, 'Patient was a poor historian,' to prepare everyone in advance. That way they can't fault you for a poor medical history and incomplete exam," he said. He also suggested that we throw in a "bilateral," the term meaning "both right and left," every once in a while during the review of the physical exam. It just sounded good, he told us.

Many of our patients recognized the importance of our clinical story for us. They were asked to participate in our course before we arrived, and they knew we were expected to discover the right symptoms and abnormalities and elicit the relevant details of their histories to uncover the diagnoses that they and our supervisors already knew. They knew we would be tested on the clinical story we created. So some of them tried to help us along and smooth over the early mishaps and foibles in order to save face in front of our supervisors.

Roy and Carlos were assigned to the same Patient/Doctor session in a different hospital from mine. Both sites followed the same curriculum, and our experiences were remarkably similar. They also began by learning the neurologic exam. In his first patient physical Roy forgot to test the facial nerve by having his patient squint his eyes and

grimace. When his preceptor entered the patient's room to review Roy's exam, the preceptor asked Roy about the test for the facial nerve, demonstrating it on himself.

Realizing that Roy had forgotten to test him, the patient interjected, "No, no. Don't you remember? You tested it!" The patient squinted.

"It was normal, remember?"

Not fooled for a minute, Roy's preceptor told the patient, "It's okay. You don't have to cover for him."

Carlos was told in confidence by his patient, "Just skip to the head stuff. That's where everything is wrong."

The change in focus from first to second year seemed dramatic. In one of the first Patient/Doctor sessions the two physicians in charge of our course demonstrated how to take a more directed medical history than we had learned in Patient/Doctor I. They sat in front of our group of 40 students, and one pretended to be a patient while the other moderated as we asked the "patient" questions. In answering a question about her symptoms, our "patient" began to digress. "I'm really concerned about my son-in-law who was laid off three months ago and can't find a job. So I am responsible for all their child care, and money is tight...."

After a few minutes our moderator turned to us. "Isn't anyone going to stop her?" she said. "In the wards you are under time pressure." Now it was the clinical story that was most important.

As we sat talking one evening, Carlos lamented this transition in our patient experiences. "Last week I saw this patient, and he would have been a great Patient/Doctor One interview. He had a really interesting story. But now I almost felt like his stories got in the way of getting the history and getting to the physical exam," he said.

As eager as I had been to get to the physical exam, I was surprised to miss the freedom of first year to explore whichever issues I found most compelling. I even resented the pressure to find the "right" diagnosis-oriented story. While I knew I hadn't lost the ability to hear the human experience of my patients, I had to learn to channel it toward the medical diagnosis. As I donned my white coat and entered the hospitals again that year, I felt I was one step more clinical. ❧

*Ellen Lerner Rothman '98 is a first-year pediatric resident at Children's Hospital in Boston.*

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